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Teacher and Parental Perspectives of Barriers for Inclusive and Quality Education in Mongolia

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Abstract

This paper calls attention to the concept of quality education for children with disabilities in developing countries, specifically focusing on Mongolia. Quality education for children with disabilities has been overlooked by the international community despite the extensive commitment to ensuring access to basic education and learning outcomes for children (Croft, 2010). At the same time, influenced by the international community, inclusive education policies that bring children with disabilities into regular classrooms, have been introduced in many developing countries. While there have been some studies on inclusive education in the developing world, very little research has been conducted on the situation in Mongolia. This paper therefore examines how teachers and parents in regular and special schools evaluate the current educational provisions in schools towards better education for children with disabilities in Mongolia. The findings from the descriptive analyses demonstrate that perceived barriers are ‘poor school facilities,’ ‘lack of equipment,’ ‘inadequate incentives for teachers’ and ‘insufficient school budgets.’ In addition to these items, teachers and parents in special schools are highly concerned about ‘lack of understanding in the community.’ Third, each of the four groups—teachers and parents in regular and special schools—perceive ‘resource barriers’ including issues of money and facilities as the strongest obstacle, followed by ‘teacher training and experience’ and ‘understanding’ at statistically significant levels. Fourth, there are statistically significant differences in opinions between parents and teachers in regular schools related to ‘resource barriers’ (with parents viewing the problem as more important). As for ‘teacher training and experience’ barriers, there is a significant difference between personnel in regular schools and special schools as parents and teachers in regular schools perceive that there is a lack of opportunity for training. The last category of barriers evaluated is ‘understanding’ (referring to ‘lack of understanding by classmates,’ ‘lack of understanding by

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parents of children with disabilities,' 'lack of understanding by parents of children without disabilities' and 'lack of understanding by teachers'). Teachers in regular schools significantly feel strongest about the lack of understanding while parents in special schools significantly feel this least among all the groups. Qualitative data from interviews aligns with the statistical results and identifies that teacher training is unlikely to be effective without an appropriate teaching environment. Based on the results of both statistical and interviewed data, the study highlights the needs for a comprehensive approach to strengthening coordination and collaboration with stakeholders and donor communities, which may eventually bring benefits to all children by improving the quality of schooling.

Keywords: quality education, inclusive education, disability, perception, parents and teachers, Mongolia

1. Introduction

“Inclusive and equitable quality education¹” comprises Goal 4 of the United Nation’s Sustainable Development Goals (SDGs) and Education 2030 initiatives. Target 4.1 of the goal calls for “equitable and quality primary and secondary education” for “all girls and boys,” while Target 4.2 seeks to ensure “equal access to all levels of education,” including facilities, for “persons with disabilities” (UNESCO and WEF2015 2015a). Broad commitment to both human rights and child development will be required to achieve the goal of providing education for children with disabilities (UNESCO 2014).

Prior to the above-listed initiatives, the international community convened a worldwide conference on the needs of education access for all children at Jomtien in Thailand in 1990. The subsequent World Declaration on Education for All (EFA) in 2000 adopted the goals of Jomtien, emphasizing the importance of equity and basic education access for all children. The Millennium Development Goals (MDGs) also included specific targets on universal primary education along the same lines as EFA. As a result of these efforts, global commitments have improved access to school overall. By 2015, the global net enrollment rate in primary education was estimated to be 93% (UNESCO and WEF2015 2015b, xii). However, 57 million children were still reported to be out of school at the primary level in 2015 (UNESCO and WEF2015 2015b, 6), with one-third of those children thought to have disabilities (UNESCO 2007a, 74; Sæbønes et al. 2015, 4).

In many countries, education for children with disabilities was originally developed in special education settings that were separate from the regular school context. From the 1970s and 1980s, integrated education was practiced in certain contexts to adjust the needs of children with disabilities to mainstream education. In such integrated environments, while children with

¹ ‘Quality education’ in this paper follows the 4th goal of the Sustainable Development Goals, which mandates that all children should be able to receive equal access to education in order to acquire relevant learning and skills in a safe environment.

disabilities could potentially study alongside non-disabled children, support continued to be provided in segregated settings. In 1994, 117 governments and international organizations convened at the World Conference on Special Needs Education, producing the Salamanca Statement.² The statement reaffirmed the global goals and commitments of EFA (UNESCO and Ministry of Education and Science, Spain 1994), with Article two declaring the fundamental right of people with disabilities to be included in regular school settings. Consequently, donors and international organizations have steered the implementation of inclusive education, expecting that children with and without disabilities will mutually benefit from learning together and embracing diversity. Developing countries³ began to introduce educational policies designed to bring children with and without disabilities together to study in the same spaces, rather than persevering with conventional separate special education (Kalyanpur 2011).

While there are a great many expectations about the results from inclusive education, a number of scholars have raised concerns over ways that non-inclusive learning environments have persisted in schools considered to have already introduced such inclusive policies (e.g., Prinsloo 2001; Mutasa 2000). Many regular schools, especially in developing countries, struggle to improve their delivery of the fundamental provisions of education. In these circumstances, schools will find it difficult to meet the learning needs of children with disabilities while still ensuring quality inclusive education provisions (Wapling 2016). Consequently, while children with disabilities may attend regular schools, they do not do so in a way that realizes the true meaning of inclusive education of benefit to children both with and without disabilities.

The gap between high policy intentions and the actual circumstances in schools has created situations where children with disabilities have multiple difficulties in accessing quality education, particularly in developing countries. Stakeholders at these school sites may provide

² Inclusive education is declared to be beneficial to all people by helping to decrease discrimination, improve awareness, establish an inclusive society, realize good quality education and raise cost-effectiveness (UNESCO and Ministry of Education and Science, Spain 1994).

³ The term 'developing countries' in this paper means countries other than high-income economies with a GNI per capita in 2016 of US\$12,236 or less (World Bank online data for developing countries, accessed October 2017).

important views on what could improve education for children with disabilities. Therefore, this paper aims to examine barriers to improving education for children with disabilities, from the views of both parents (guardians) and teachers (school personnel) of public school education. This paper also considers a range of concrete measures for policymakers and the international community based on the perspectives of stakeholders.

2. Literature Review on Barriers to Inclusive and Quality Education for Children with Disabilities

An examination of the current educational barriers could provide a starting point for developing more effective methods to improve education for children with disabilities. Identifying barriers to learning in educational practices may provide a basis for designing strategies that will decrease the barriers and maximize resources for quality of learning for children with disabilities (Vaughan 2002). From a social exclusion perspective, attitudinal barriers may include the attitudes of teachers, societies and governments (Peters 2009), while structural barriers may consist of inadequate budgets, lack of human resources and insufficient professional development for inclusion. Barriers to inclusion are also recognized when schools do not provide flexible curricula and teaching or appropriate assessment methods (WHO and World Bank 2011). Other studies have identified similar barriers such as attitudes of general education teachers, large class sizes, lack of equipment and support (Save the Children 2002; Rouse 2008; WHO and World Bank 2011).

To understand such barriers, Booth and Ainscow (2002) emphasize the importance of soliciting perspectives from key stakeholders, including parents and students, school staff and teachers. While education in general requires the participation of all stakeholders, inclusive education approaches encourage collaboration and shared responsibilities both from teachers and families in order to address issues that occur in schools (Acedo, Ferrer and Pàmies 2009). Chmiliar (2009) states that, by reviewing the perceptions of various stakeholders, inclusive

effectiveness can be reinforced. This section will review potential barriers for children with disabilities to receiving quality education as perceived by teachers and parents in both regular and special schools.⁴

2.1 Perceived Barriers in Joint Studies of Teachers and Parents

Reviewing and analyzing perceptions from both teachers and parents is crucial to the facilitation of seamless support and efforts for quality education outcomes, as noted in the previous section. Frederickson et al. (2006) point out the issues of teaching and learning activities and collaboration among stakeholders by examining the perspectives of 107 students, parents and school staff in mainstream and special schools at both high school and elementary school levels in the UK. Using telephone interviews and focus group discussions on issues of inclusion, their study found that all groups are concerned about academic and social skills for children with disabilities. After being separated into stakeholder groups, the teachers pointed out the importance of improving teachers' attitudes and sharing of knowledge and skills, as well as teaching curriculums, planning and preparation. At the same time, teachers expressed concern over their workloads, a point not recognized by the parental group. On the other hand, the parents perceive communications and the relationship between the school and parents as a barrier, a problem not recognized by the teacher group. The students have academic and social concerns, including bullying, with the perceived significance of these issues considerably greater than those of the teachers and parents (Frederickson et al. 2006). Thus, their study indicates that concerns differ considerably depending on the stakeholder group.

⁴ This study includes special schools because Mongolia's inclusive policy mandates the need to provide equal opportunities for children with disabilities to participate at all public schools. Therefore, the study does not exclude special schools.

2.1.1 Insufficient Communications and Inflexible Educational Provisions

Another study was conducted by the Center for Special Needs and Inclusive Education, Hong Kong Institute of Education (CSENIE) in Hong Kong. Results from the survey of approximately 5,000 people show a large gap between different stakeholders on recognition of their responsibilities toward inclusion. Only 52% of the teachers understand their responsibilities for inclusion while 89% of the parents of children with disabilities believe teachers have a responsibility to implement inclusion (CSENIE 2012, 39).⁵ Other similar studies (e.g., Ademokoya and Iheanachor 2008; Pivik McComas and Laflamme 2002) also found that teacher perceptions generally seem to concentrate on their immediate working responsibilities, such as teaching skills and workload, while parents expect communications and collaboration with teachers to extend beyond technical skills. This may imply that school organizations tend to have closed characteristics, with little opportunity for communications or collaboration between the school and home. Consequently, these studies emphasize the importance of mutual communications in building collaboration between the school and home for better implementation of inclusive education (Frederickson et al. 2006).

A further study (Chmiliar 2009) also reveals gaps in perceptions between different stakeholders. In-depth interviews were conducted with grade five and six students with learning disabilities, their parents and teachers in regular schools.⁶ In Chmiliar's study, teachers describe their inclusive efforts in terms of ensuring flexibility in classroom activities, homework, examinations and scoring. The teachers also emphasize the need for collaborative work in preparing teaching plans and sharing experiences among teachers. The parents perceive that information is one-way, with insufficient opportunities for collaboration with schools. They express a need for greater involvement in order to make a more inclusive environment. On the

⁵ In multiple answers, teachers also believe that parents of children with disabilities have responsibilities (85%) and parents of children with disabilities also believe their own responsibilities (91%).

⁶ The study does not specify the country from which the data was taken.

other hand, the students are seeking more flexible homework, appropriate items in examinations and evaluations, and that they are concerned about bullying, despite teachers' efforts. Although it is difficult to generalize due to the small sample size, this study concludes by highlighting the importance of exploring differences or similarities in perceptions in improving quality and inclusive education, in addition to ensuring appropriate teaching skills and learning contents. Research by Blask (2011) similarly indicates that a lack of communication and collaboration between different stakeholders such as teachers, parents and children as well as between teachers comprises a crucial barrier.

2.1.2 Barriers Perceived in Middle-Income Countries

Turning to cases from less-developed contexts, a study in China shows that educational resources and teachers' overwork are perceived to be a problem, particularly among teachers' groups. Ding et al. (2006) examined data from a survey of 344 parents of children with disabilities⁷ and 100 teachers for students with mild and moderate cognitive disabilities in special schools in Beijing. The study found that the majority of teachers perceive the main barriers to education for children with disabilities are insufficient educational resources, low salaries and overloading of teachers with responsibilities. The parents also perceive inadequacies in the current curriculum and children's vocational counseling, as well as communication among parents and collaboration with schools, beyond occasional meetings. This mirrors findings from the aforementioned study in Hong Kong, with 43% of the teachers and 61% of the school principals perceiving insufficient subsidies as barriers, whereas 37% of the parents of children with disabilities acknowledged resource insufficiencies (CSENIE 2012, vi). These studies emphasize that teachers consider monetary and workload issues as significant in schools, although parental perceptions tend to favor the need for greater collaboration.

⁷ Ages and grades of the children are not specified.

2.1.3 Summary of Perceived Barriers by both Teachers and Parents

From the preceding studies on barriers to better education for children with disabilities from both teacher and parental perspectives, considerable differences in perceptions can be identified. While parental expectations for schools seem to exceed teachers' efforts in communications and understanding of their responsibilities, teachers tend to concentrate on the issues of technical and educational provision scarcities. Nevertheless, due to the limited numbers of studies, especially those with quantitative analysis regarding the perceptions of stakeholders in developing countries, a systematic review on barriers perceived by different groups is needed. Effective analysis to comprehend scales and tendencies in differences and similarities of the perceptions among the groups of parents and teacher appear to be lacking in this area of study.

The following sections explore studies that researched perceived barriers to better education for children with disabilities by parents and teachers separately in different studies. The review focuses firstly on studies that investigate perceptions of families and children, followed by studies on the perceptions of teachers (school personnel).

2.2 Barriers Perceived by Parents

2.2.1 Crucial Perceptions of Parents

The importance of family engagement in education and considering children's opinions is crucial because families play a large role in education (WHO and World Bank 2011). Parental assessments of educational provisions are indispensable since their perceptions seem to view school components more comprehensively and include a better understanding of children's experiences than the teachers. This is a point highlighted in the study by Gasteiger-Klicpera et al. (2013) in Austria, where parents outlined key positions on what types of education their children will receive. A study in South Africa and in the United States (Engelbrecht et al. 2005) similarly

indicates that parental perceptions are not included in decision-making, notwithstanding its importance in both countries. Despite the importance of parental involvement, the bulk of studies have focused on perspectives of teachers and parents of children without disabilities, and further work is needed to highlight the perspectives of parents of children with disabilities and their concerns (Kasari et al. 1999; Chien and Lee 2013). Yet, among the handful studies of parental views, results show that parents worry about educational service delivery in a number of ways although, overall, they are supportive of inclusive education (Engelbrecht et al. 2005; Boer, Pijl and Minnaert 2010). Negative perceptions of regular schools by parents could undermine support for sending children to the schools (WHO and World Bank 2011) and affect their cooperation in the learning process.

2.2.2 Insufficient Social Inclusion at School Perceived by Students

The following studies focus specifically on the perceptions of students with disabilities, finding that issues related to social isolation are a key challenge. Emer Ring and Joseph Travers (2005), for example, studied children's views on curriculum and social inclusion. They interviewed 17 children with learning disabilities in a regular primary school in rural Ireland, finding a wide range of barriers to interaction with children with learning disabilities, from teaching skills to classmates' understanding. The study concludes that social inclusion is a more significant and problematic factor than curriculum improvement (Ring and Travers 2005). Lack of social acceptance is a key issue shown in another study (Angelides and Aravi 2007), which retrospectively interviewed 20 deaf or hard-of-hearing adults in Cyprus. The study found that students with hearing impairments feel that they are not included due to insufficient opportunities for interaction with teachers and their peers, lack of satisfactory teaching skills, and the exclusionary curriculums employed in regular schools. Similarly, a study on youth with intellectual disabilities in Australia found limited interactions with friends in social settings

(Asselt, Buchanan and Peterson 2015). From those studies, people with disabilities perceive isolation and disconnection comprise barriers to better education.

2.2.3 Infrastructural, Understanding and Educational Component Barriers Perceived by Students and Parents

Studies that examined parental perceptions, together with student perceptions, have identified various types of barriers. One study by Pivik, McComas and Laflamme (2002) in Ontario, Canada, utilized several group discussions with 15 students aged from 9-15 with mobility disabilities and twelve parents of those students. With a 75% agreement level by coded analysis, the study identifies a range of issues such as school infrastructure and transportation to school, conscious and unconscious behaviors, and constraints resulting from the lack of support in moving around the school and changing clothes. The students also identify understanding and awareness from their peers in school life as crucial barriers. Parents of the primary school students emphasize the need to improve the understanding of issues related to inclusion of children with disabilities in regular schools. This could be accomplished in training sessions among regular school teachers, as well as by school directors when initiating stakeholders. This study on the perceptions by children and parents reiterates the issues of infrastructure and transportation as well as lack of understanding.

The following studies on parents emphasize comprehensive issues at regular schools. An analysis of concerns of 437 parents of children with mild, moderate and severe disabilities in various types of schools in the United States revealed that half of the parents worry about individualized instruction taken in regular schools although they are supportive of the concept of inclusion (Leyser and Kirk 2004). Similar concerns are also noted by other studies showing that additional provisions such as speech therapy and individual support (Kasari et al. 1999), as well as adjusted instructions and adequate educational provisions (Boer et al. 2010), are not provided

in regular schools. Parents are also concerned about children's isolation, understanding by parents of classmates, and communication between parents and schools, as well as teachers having sufficient time in regular schools to help each of the children with a disability (Leyser and Kirk 2004). A later study by the same authors (Leyser and Kirk 2011) in the US reveals similar results. The top concerns for parents are communication with teachers and school district administrators in addition to concerns over insufficient teaching skills. In another area, a study by Donoue and Bornman (2014) in South Africa indicates that parents are concerned about school expenditures, expecting less of a return on investment in education for children with disabilities than their siblings without disabilities. The parents highlight the barriers that have prevailed over wide-ranging educational components.

2.2.4 Insufficient Communication Perceived by Parents

While lack of communication and collaboration repeatedly appear in studies of parental concerns (Stanovich 1996; Bryer et al. 2004; Wong et al. 2014), the issues of communication and collaboration seem to be rooted in teachers' attitudes to school culture. A study of 840 parents of children with disabilities in Austria by Gasteiger-Klicpera et al. (2013) found that dissatisfied parents chose schools without fully understanding educational provisions. Parents express concern about their schools' denial of their opinions and requests. Moreover, parents with low satisfaction in schools collaborate less with teachers and provide less information to school directors than satisfied parents (at a statistically significant level) (673). This reported dissatisfaction of parents may be a result of school personnel attitudes and culture.

Another study, focusing on cases from South Africa and the US, also discloses how alienation and exclusion are attributed to an exceeding number of teachers at meetings, use of professional jargon when speaking to parents, and teachers' belief in their superior status over parents (Yssel et al. 2007). This study also showed that, the more advocacy actions parents took,

the less cooperative those teachers became. However, parental constraints on involvement could be detrimental to quality education (Swart et al. 2004; Yssel et al. 2007; Wong et al. 2014). These studies demonstrate that successful inclusion could be established from mutual provisions, communication and collaboration as well as parental involvement in the process of school improvement.

2.2.5 Summary of Perceived Barriers from Parents

Regarding the perceptions from children with disabilities and their parents, barriers to better education for children with disabilities appear to be comprehensive, in areas such as barriers of understanding, communications and collaborations as well as school infrastructure, transportation, teaching and learning issues. The studies seem to concentrate particularly on understanding and communication issues. Only one case study—from South Africa—explored perceptions of barriers from parents in developing countries. Even in developed countries, with few evidence-based studies, it is difficult to develop a picture or comprehend the magnitudes of each barrier in terms of all of the educational components considered by parents.

2.3 Barriers Perceived by Teachers

2.3.1 Insufficient Teaching Environment and Resources

Compared to the low number of studies on the perceptions of parents and children, there are a greater number of studies that have analyzed barriers perceived by teachers only. One study of regular primary schools in Bosnia and Herzegovina (Memisevic and Hodzic 2011) shows that the teachers perceive that they have insufficient levels of time, skills, assistance and resources,

among other things.⁸ The study emphasizes the importance of school management support in terms of class size and collaboration with teachers in special schools (see Buell et al. 1999).

A study in regular primary schools in Czech Republic found similar results. More than 90% of teachers perceive large classes, lack of supporting provisions for teachers, lack of knowledge and skills on teaching for children with disabilities as barriers. Furthermore, it found that school staff reported scarcities and misallocations limiting their ability to create an appropriate environment (94%), lack of preparedness of classmates and their parents to engage in the social settings (64%), inadequate pedagogical and psychological support, inadequate infrastructure, and teachers' unwillingness to make modifications (Bendová and Fialová 2015, 817). School staff with experience of accommodating children with disabilities have fewer perceived obstacles for inclusion (Bendová and Fialová 2015). A study in Ghana (Ocloo and Subbey 2008) found that generally perceived barriers are similar to those mentioned above, emphasizing inadequate and disproportionate school resources, inappropriate class sizes, and lack of teacher training sessions.

A study in Lesotho (Johnstone and Chapman 2009) also claims that teachers' knowledge and skills are significantly related to the success of inclusive education, which could be supported by appropriate and sufficient teacher training. Regarding the difficulties of teacher training provision in Cyprus, teaching staff revealed that trainings are inadequate because the focus is on theoretical approaches rather than practical applications (Angelides 2004). There is little room for shared experiences, sessions are short and irregular, and there are few plans for further professional development in special education. UNESCO also acknowledges the difficulties of teacher training because teachers often do not comprehend the contents of educational policy and the meaning of crucial roles of teachers in education for children with disabilities (UNESCO and IBE 2007). School staff and some principals also emphasized the need for trainings with adequate contents and length for all school staff in order to implement

⁸ See also Buell et al. 1999, 145; Scruggs and Mastropieri 1996, 72.

inclusive education, while there is little training for principals. School social workers are provided, yet school managerial plans do not consider professional development in Hong Kong (CSENIE 2012). A review of 18 studies by Schumm and Vaughn (1995) found that teachers perceived they are unprepared to teach children with disabilities due to insufficient chances and inadequate training opportunities to improve and adapt their knowledge and skills.

2.3.2 Teachers' Attitudinal Barriers

A number of studies (e.g., Avramidis and Norwitch 2002; Eynat, Schreur and Engel-Yeger 2010; Mittler 2003) assert that teachers' attitudes are essential factors for better education for children with disabilities. Their attitudes and beliefs about inclusion are important in guiding schools towards inclusion (Grieve 2009). Monsen and Frederickson (2004) studied teachers' attitudes towards inclusion of children with disabilities and classroom satisfaction. The study surveyed 1779 students and 67 teachers of primary and intermediate schools in New Zealand. The results show that teachers' positive attitudes on inclusion are significantly related to higher levels of student satisfaction. Another study (Monsen, Ewing and Kwoka 2014) in United Kingdom examined teacher perceptions of barriers and their attitudes, along with willingness to include children with disabilities. They also found that teachers with positive attitudes towards inclusion enjoy teaching significantly more than teachers with less positive attitudes, and that students enjoy learning considerably more in classes where teachers have positive attitudes than those with less positive attitudes.

2.3.3 Barriers Perceived by Teachers Affecting on Their Attitudes

The following studies generally show that teachers' positive attitudes towards inclusion are influenced by teachers' perceptions of environmental barriers for better education. A review of regular and special schools from preschool to high school levels also indicates that in general,

teachers seem to take positive attitudes towards inclusion of children with disabilities in regular schools when their teaching environment is supportive of teachers in that they feel prepared to teach children with disabilities (Boer, Pijl and Minnaert 2011; Avramidis and Norwich 2002; Wilkins and Nietfeld 2004; Chhabra, Srivastava and Srivastava 2010). For example, Sokal and Sharma (2013), researching teachers of kindergarten to Grade 8 in three school divisions in Manitoba, Canada, found that teacher training helps to form teachers' attitudes and reduce concerns over inclusive education. While at a statistically significant level, the results are not consistent (Sokal and Sharma 2013, 65), the researchers found that teachers with training worry less about accepting children with disabilities and lowering the learning standards in comparison with teachers who have not received training. Similarly, Avramidis, Bayliss and Burden (2010) studied the attitudes and experiences of teaching children with disabilities and training among 81 teachers in regular elementary and junior high schools in the United Kingdom. The study found by multivariate analyses of variance (MANOVA) that teachers' cognitive, affective and cognitive domains differ significantly between teachers with experience of teaching children with disabilities and those with no experience (201). Furthermore, the study utilized MANOVA analysis, finding significant differences in three domains between teachers with training in special education and those without (201). Evidence of teachers' attitudes as critical factors for implementing successful inclusion, along with teaching experience and training was found in several other studies (e.g., Forlin et al. 2009; Avramidis, Bayliss and Burden 2010). These factors may account for at least some of the barriers to better education for children with disabilities.

In low-income countries, similar findings can be found in studies from Uganda (Ojok and Wormnæs 2013), Botswana (Mukhopadhyay 2014), Ghana (Agbenyega 2007; Obeng 2007), India (Das, Kuyini, and Desai 2013) and Indonesia (Kurniawati et al. 2012). They also note the importance of teacher training, including pre-service training (PRESET) and to a greater extent, in-service training (INSET), in developing teaching skills and knowledge about children with

disabilities and experience with children with disabilities as factors affecting teachers' attitudes and willingness towards inclusion

Studies on teacher training tend to analyze the relations between teacher training and their positive attitudes. At the same time, other barriers perceived by teachers are also considered to be crucial in affecting teachers' positive attitudes towards inclusion. A study in government schools at the primary level in Bangladesh (Ahmmed, Sharma and Deppeler 2012) reveals that teachers' perceptions of levels of school support, such as availability of school support for teaching, collaboration among stakeholders, and provision of necessary class materials, are positively related to teachers' intentions towards inclusion as well as teacher's self-efficacy and positive perceptions on inclusion, all at the 0.00 level (Ahmmed, Sharma and Deppeler 2012, 327). Similarly, teachers' perceptions on adequate levels of support from within the school and outside of the school are significantly related to their attitudes and willingness to be inclusive. This includes factors such as school resources, professional development (Agbenyega 2007), access to therapists and collaboration from school staff, teaching assistants and parental assistance (Monsen, Ewing and Kwoka 2014).

2.3.4 Summary of Perceived Barriers by Teachers

The above studies examined the relationship between teachers' attitudes and their perceptions of barriers and support. Results show that teachers' attitudes are a very crucial factor in children's satisfaction at school, and their attitudes are considerably affected by support from both within and outside the school. Consequently, ensuring that support is available to teachers is imperative for successful inclusion of children with disabilities in schools (Monsen, Ewing and Kwoka 2014).

2.4 Summary of Literature Review on Perceived Barriers for Better Education by

Teachers and Parents

In this section, first, because many previous studies have researched perceptions from teachers and parents perspectives separately, the relative magnitudes of insufficiencies on the current educational environment for children with disabilities remain partial and unclear. Analyzing both perceptions by parents and teachers in the same study could effectively complement each mutual dimension and establish strategies for providing better education. Second, most studies that have investigated barriers to better education for children with disabilities have been conducted in the context of high-income countries. Only a handful of studies utilizing large-scale quantitative surveyed data in developing countries have been conducted. While inclusive policies have been implemented worldwide, there have been few evidence-based reviews of schools in developing countries that have incorporated both teachers and parents together in the same study. Given that children with disabilities have more obstacles to overcome to complete primary school in such countries than in developed countries, evidence-based research is required to provide effective policy recommendations. This paper will explore how parents (guardians) and teachers (school staff) evaluate the current school situations for children with disabilities in the case of Mongolia, where the policy of inclusive education in regular schools began in 2003. It considers the how barriers towards better education are perceived by parents and teachers in Mongolia, and how these perceived barriers are similar or different to those identified in other countries.

3. Overview of Policies on education for People with Disabilities in Mongolia

Mongolia established its first special classes for children with visual and hearing disabilities in 1962, followed by special schools for those children in 1964 based on the model developed for special education in the former Soviet Union. Under the socialist system in Mongolia during

this period, as many as 120 experts received training for special education in Hungary and Soviet countries. The trained experts were widely placed in special schools in Mongolia where they conducted trainings for the teachers (JICA 2014).

This formed the basis for the remarkable expansion of special schools throughout the 70s and 80s across Mongolia. However, due to change of the social system and confusion following the fall of the socialist government in the 1990s, it became difficult for Mongolian special education to maintain itself separately from the main system. Therefore, integration education gradually began taking over from special education, eventually becoming the dominant form of education for people with disabilities. Starting with a UNESCO project on integration education in 1993, the Danish International Development Agency (DANIDA) conducted a project for integration education from 1994. Save the Children implemented another “Integration Education Project”⁹ from 1998, aiming to accept children with disabilities in ordinary kindergartens and regular schools (JICA 2014).

Under these circumstances, education for children with disabilities within the country and the growing international trends in relation to education and disability, the Government of Mongolia moved further toward promoting inclusive education from the 2000s. The Ministry of Education, Culture and Science of Mongolia (MECS)¹⁰ established the “Inclusive Education Unit” in the Primary Education Department and started its first national program on inclusive education: the “Program to Enroll Children with Disabilities Equally in Education,”¹¹ which ran from 2003 until 2008 (JICA 2014). Throughout the period of its national implementation,

⁹ The term ‘Integration Education’ was revised to ‘Inclusive Education’ by the representative of the Save the Children UK who was in charge of a program in Mongolia (JICA 2014).

¹⁰ With the new administration of 2016, the Ministry of Education, Culture and Science (MECS) has changed its name to the Ministry of Education, Culture, Science, and Sports (MECSS). However, this section uses MECS because the data and/or events occurred under the previous name.

¹¹ In Mongolia, ‘Inclusive Education’ is translated and understood in a general way to mean “education to accept children with disabilities in regular schools.’ Therefore, in this working paper, we used a term translated directly from Mongolian: the “Program to Enroll children with Disabilities Equally in Education” (*Khugjliin Berkhsheeltei Khuukhdiig Bolovsrold Tegsh Khamruulan Surgakh Khutulbul-iin Khereljiltiin Yavtsad Khuusen Khyanalt-Shinjilgee* in Mongolian), thus distinguishing it from ‘Inclusive Education’ as described by international organizations (JICA 2014).

approximately 5,000 teachers at primary schools and kindergartens in urban and rural areas were trained on the theory and methodology of education for children with disabilities, while a large number of training manuals on the concept and methodology of inclusive education were provided to teachers with the support of UNICEF and other international organizations (UNESCO 2007b)¹². UNESCO also supported programs to build capacity among relevant staff and improved equipment to promote inclusive education (Government of Mongolia 2009; JICA 2014).

The Government of Mongolia also made noticeable progress on legislation related to education for children with disabilities during this period. Starting with the recognition of the right to education for children with disabilities in the Disability Social Security Law in 2005, parliament approved the addition of the “Environmental improvement for accepting disabled children into regular schools” in 2006,¹³ increased staff salaries at educational institutions that provide special needs education¹⁴ and ratified the Convention on the Rights of Persons with Disabilities in 2008. Furthermore, in its national education strategy, MECS developed the “Master Plan for Mongolian Education Development for the period of 2006 – 2015,” in light of the lessons learned from the past political actions and issues (UNESCO 2008). The master plan aimed to improve and expand social services for children with disabilities, with the goal of enabling them to complete their basic education by providing quality education at regular schools, improving special needs education, and developing learning environments suited to children with disabilities (International Bureau of Education-UNESCO 2007).

However, despite these substantial achievements in the formulation of legislation and policies for children with disabilities in Mongolia, a number of issues remain in terms of implementation in the field. According to Otgonkhagva (2012, 290), “the actual situations in

¹² 8.1, 54.0, and 42.0 million tugrug were disbursed by Child Fund of United Nations, Save the Children UK and SIDA, respectively, and ADRA provided training for sign language to trainer-teachers.

¹³ Article 13, Paragraph three in the Elementary and Secondary Education Act.

¹⁴ Article seven, Paragraph eight in the Disability Social Security Law.

schools often do not meet the guidelines established in the regulations regarding children with disabilities.” The Law on Social Protection of People with Disabilities mandates that all teachers who teach children with disabilities will be paid an additional 10% to 30% allowance on top of their salary (JICA 2014, 31). However, based on interviews, few of the teachers in regular schools were aware of this added compensation (May 2014). Moreover, several other major issues surrounding children with disabilities were identified in JICA’s observations, such as the situation regarding the undeveloped early diagnosis system for children with disabilities, lack of appropriate curriculum and textbooks, as well as the teachers’ inadequate ability to manage children with disabilities. Budgetary issues remain one of the most critical issues for the government’s effective management of activities related to education and disability (Hayashi 2010). While 70% of the allocated budget in the education sector is spent on teacher salaries and heating costs during winter in Mongolia, the number of teachers has increased, resulting in a further decline in financial resources across the entire education sector. In this situation, budgetary allocations for education of children with disabilities often receive a lower priority, resulting in serious delays in implementation of the government’s policies.

On the other hand, recent progress at the policy and institutional levels has actually accelerated, although effective solutions for above issues are yet to be revealed. Following the inauguration of the new administration in 2012, experts on special needs education were placed in the MECS. The Mongolian Institute of Educational Research, Institute of Teacher’s Professional Development and Mongolian State University of Education started a new course for special needs from 2013. The series of laws on education for children with disabilities was further amended to provide additional compensation for teachers working with children with disabilities in regular schools, deploy professionals and specially trained personnel to regular schools, set the target number of disabled children per teacher, as well as establish educational standards for children with disabilities (JICA 2014).

The second phase of the national program has been undergoing a preparation and approval process for several years and is currently being re-examined by the new administration of 2016. This program involves planning of an integrated policy based on the performance of the current legislative framework. It includes investigation of the needs of children with disabilities at the national level, incorporation of special needs education in teacher training curriculums, development of tools for the early diagnosis of children with disabilities, and an increase in the budget to improve the infrastructure for children with disabilities in kindergartens and regular schools (JICA 2014). International organizations also plan to continue providing assistance in the field of education and disability. UNICEF is implementing capacity development and building disability centers in schools to promote inclusive education, whereas the Asian Development Bank (ADB) plans to provide a loan for capacity development and strengthening of infrastructure for people with disabilities.

4. Methods

This paper primarily utilizes a quantitative approach, with additional support from qualitative data, to develop an in-depth understanding of the barriers for better education for children with disabilities. Survey items were developed by JICA-RI and the research was conducted jointly by the Independent Research Institute of Mongolia (IRIM) and JICA Research Institute (JICA-RI). The quantitative data were collected in November and December in 2014 in the Khuvsgul, Dornod, Dornogovi and Uvs Aimags,¹⁵ selected as geographically representative of each region. The respondents in the survey were 55 school directors or social workers, 625 teachers, 939 parents of children with or without disabilities in schools, and 150 parents of children with disabilities who are out of school (see Table 1). In October and November in 2014 and October

¹⁵ *Aimag* refers to the administrative subdivision of provinces in Mongolia.

in 2015, interviews¹⁶ with 7 teachers (4 in regular schools), 6 school administrators (4 in regular schools), 15 parents (10 in regular schools), and 3 NGO staff members¹⁷ were carried out at school sites in order to provide additional details for in-depth analysis.¹⁸ Along with the interviews, authors also undertook class observations to view teaching and learning activities as well as observe the environment at regular and special schools in Ulaanbaatar, Dornogovi and Tuv Aimags. In this paper, the data from teachers and parents of children with disabilities in schools are analyzed.

4.1 Sample Selection

School directors, social workers, teachers and parents in six special public schools and 24 primary-level regular public schools in Ulaanbaatar, and 17 primary-level regular public schools in *aimag* centers and ten primary-level regular public schools in rural *soum*¹⁹ participated in the survey. In all of the six special schools in Ulaanbaatar, children with disabilities were randomly selected based on student lists that schools provided for the survey. Subsequently, teachers who were in charge of those children and parents of children with disabilities were selected accordingly.

For regular schools in Ulaanbaatar, 24 schools in nine districts where there are a high number of children with disabilities registered were selected.²⁰ In the *aimags*, from two to ten public schools²¹ in each *aimag* center and two or three public schools near the *aimag* center and

¹⁶ Interviewees were the people whom the authors were able to reach.

¹⁷ Regarding data from interviews, while some information on sources has been included, information which could be used to identify individual respondents has been removed.

¹⁸ The qualitative data provides support for quantitative results, but is insufficient for categorization by theme or participant. For future research, the authors would like to collect sufficient interview data enough to enable systematic analyses.

¹⁹ *Soum* refers to administrative divisions below an *aimag* in a province.

²⁰ Data used in school selection for the survey was derived from the “Report of the Secondary School Students in Academic Year 2013-2015”. This dataset includes students’ information from grade one to twelve.

²¹ The original plan for the survey was to select 5 schools in each *aimag* based on the data from the “Report of the Secondary School Students in Academic Year 2013-2015.” Three schools had fewer numbers of children with disabilities and fewer numbers of teachers with experience of teaching

remote areas were selected with the criteria that children with disabilities were enrolled. Within each school, all directors,²² or deputy directors in case of the director's absence, all social workers and all teachers who are currently teaching children with disabilities (if present on the interview day) responded to the questionnaires at school sites in a self-administered manner. Teachers who did not have experience of working with children with disabilities were randomly selected. As for parents²³ of school children, all parents of children with disabilities were surveyed based on the list provided the school for the survey. An equal number of parents who have children without disabilities and whose children study together in the same class as children with disabilities were randomly selected as respondents.

4.2 Data Collection and Analysis

The survey was comprised of two sections: the first section was related to the school, and contained items on the teachers' and children's learning environment. The second section was comprised of items on teacher and parent perceptions of barriers to better education for children with disabilities.²⁴ Most items employed a Likert scale of five responses,²⁵ with an option to choose 'unknown'. Other items asked respondents to "please choose from the following factors as obstacles for children with disabilities in your school" with 19 potential barriers listed and responses to each collected using a Likert scale. General information and descriptive analysis were conducted with StataSE12, and Principal Axis Factoring and Two-way Analysis of

children with disabilities. Therefore, Khuvsugul Aimag included nearby schools for data collection. Other *aimag* centers had two or three public schools.

²² School directors or representatives of schools responded to school profile questionnaires in addition to completing the teacher's survey. The data from the school profile is not used for this paper.

²³ The parents responded to the survey at school sites in a face-to-face manner. In cases when parents resided more than 50 km away from schools, parents responded to the survey at home.

²⁴ Although some studies (e.g., Kasari et al. 1999; Lamichhane and Kawakatsu 2015) found that barriers vary among types of disabilities, this paper does not disaggregate by the types because this paper is aimed at examining implications for the current inclusive education policy.

²⁵ The respondents choose from 'strongly disagree,' 'disagree,' 'agree' to 'strongly agree' with the additional option of 'unknown' as a choice. We considered the 'unknown' choice as a neutral answer.

Variance were conducted with SPSS version 23. For analysis of interview results, content analysis was used for interpreting and reinforcing the quantitative results.

5. Results

5.1 Demographic Information on Teachers and Parents of Children with Disabilities

Tables 2 and 3 present the demographic information of teachers and parents sampled for the survey. The data is disaggregated by participant category: teachers, methodologists, school social workers and principals, and parents of children with disabilities from all six special schools and 49 regular schools.²⁶

5.1.1 Demographic Information on Teachers

In Table 2, as many as 90% of all teachers have a bachelor degree or over, which indicates a considerably high education level for teachers in Mongolia. On the other hand, there are few substantial opportunities for teacher training, indicating a low proportion of teachers with PRESET and teachers with training for disability education. Nevertheless, two-thirds of teachers have teaching experience²⁷ with children with disabilities. It seems that a considerable number of teachers may face teaching with little preparation or knowledge on education for children with disabilities. Also, there are large differences between teachers at regular and special schools in terms of teaching experience for children with disabilities and the number of students in their classes.

²⁶ 54.6 % (30 schools) of all 55 targeted schools are in Ulaanbaatar.

²⁷ For categorizing mild, moderate, and severe disabilities in regard to school settings, mild or moderate types of disabilities are children with such disabilities as oral and speech disabilities, low vision or hearing, physical and mobility disabilities, learning disabilities and slow learning. Severe disabilities such as deafness, blindness, intellectual disabilities, severe and multiple disabilities are included in school settings where children need assistance from teachers with special techniques and skills.

5.1.2 Demographic Information on Parents and their Children

Regarding general information on parents of children with disabilities in Table 3, including information on children, the survey data contain only a small number of blind and deaf children because many of those children are instead included in the “severe and multiple disabilities.” category. About 41% of those surveyed are residents in Ulaanbaatar—a similar proportion to the national population. There is a large difference between regular and special schools in the proportion of disability levels of the children. Regarding types of impairments, a higher proportion of children with physical and mobility disabilities and low vision are learning at regular schools than special schools. On the other hand, more children with intellectual disabilities and severe or multiple impairments are learning at special schools than at regular schools.

5.2 Descriptive Analysis of Learning Environment for Children with Disabilities

5.2.1 School Physical Environment (including budget)

This section provides results on the overall circumstances of teachers and children with disabilities at schools in Mongolia. The quantitative data is presented first, followed by qualitative data. Table 4 shows the availability of appropriate school facilities in special and regular schools, based on responses from school directors or their proxies. Overall, as expected, special schools are equipped with better facilities than regular schools. In addition, a significant proportion of facilities remain ‘unused’ in each category in regular schools. One mother of a child with a disability in a special school revealed that facilities might also remain unused in special schools. In the interview, she pointed out that, at the school that her child attended, an elevator was built but was not used for any specific reason.

Table 5 shows parent responses on the use of school buses for their children with disabilities. As many as 96% of parents at regular schools said that their schools do not have

school buses. There is also a considerable gap between the parental and school responses at the special schools, shown in Table 3. Although all special schools own buses for children, parental responses indicate a perception that buses are not fully utilized for the purpose of transporting children to and from school. In discussing this gap, a methodologist (a head teacher) in Ulaanbaatar responded in the interview that three special schools own five buses for all children in the area, but the service does not cover children who live more than 10 kilometers away from the schools (October 2015). In addition, three parents of children in special schools in Ulaanbaatar cited inadequate school bus routes as well as difficulties in boarding and traveling on the buses (October 2015). Those children utilize public buses, accompanied by family members, or commute by private vehicle. Thus, school buses do not seem to be adequately meeting children's needs.

In summary, special schools appear to have better facilities than regular schools overall. In terms of their utilization, parents in regular schools reveal that there are unused facilities. Regarding school buses, parents in special schools claim that school buses are not fully used to promote student access.

5.2.2 Budget and Monetary Issues

Respondents were asked whether the school had received any form of support, including cash, in-kind support, or training, either from the government or donors. Table 6 shows the results on whether the schools receive any special support for children with disabilities from the government. A majority of the special schools currently receive support either from the government or donors, whereas more than 90 percent of regular schools do not receive such support.²⁸ Responses also refer to support from NGOs and donors, which shows that five special

²⁸ The school budget in Mongolia is planned based on the number of students, in addition to fixed costs, such as water and heaters, as well as teachers' compensation. The budget per student is decided by the Ministry of Education, Culture and Science (MECS) and Ministry of Finance (MoF) every fiscal year, while considering the specific needs of each region (UNESCO, 2008).

schools and only three regular schools currently receive support for children with disabilities. In the past, 5 special schools and just seven regular schools have received some support from donors. The consolidated response shows that 41 schools out of 49 regular schools (84%) have never received any support either from the government or donors for accommodating children with disabilities. On the other hand, all special schools have received some support either from the government or donors either in the past or present. Overall, support from the government and donors tends to be concentrated on special schools. This trend could imply that regular schools require more attention because these schools are also trying to include children with disabilities that are studying at those schools.

5.2.3 Teacher Training and Teaching Environment

Teachers in special and regular schools were asked whether they had received any trainings on teaching children with disabilities, along with when they had received them and the duration. Teachers' responses to these items are indicated in Table 7. In terms of receiving any training on education for children with disabilities, including pre- and INSET, 38% of teachers at regular schools and 93% of teachers at special schools have received such trainings. However, even for the teachers at special schools, 81% have received trainings on teaching children with disabilities after becoming teachers. The majority of teachers have received such trainings within the past five years, with the total length of the training less than two weeks.

The Mongolian State University of Education provides a temporary one-year teacher training program for children with disabilities and about 50 teachers who plan to work for special schools have graduated from the program every year since 2013 (Officials in Education Department, May 2014)²⁹. Also, there are sometimes in-school trainings where teachers who have trained outside of the country are able to share their knowledge (Teachers at special school,

²⁹ According to the interview (Officials in Education Department, May 2014), there is legislation whereby those graduates would be assigned to special and regular schools as assistant teachers.

May 2014 and October 2015). New teachers begin working without any training on teaching children with disabilities and are instead given on-the-job training. Teachers in special schools sometimes provide trainings for social workers in regular schools, but not teachers who are in charge of children with disabilities in regular schools (School administrator, October 2015). The teachers in regular schools receive trainings on academic subjects for the grade of which they are in charge every year and several other trainings. However, it seems that these do not include components on the inclusion of children with disabilities (Teachers at regular schools, October 2015).

Table 8 indicates the responses from schools on whether they have been provided with appropriate learning materials from the government. More than 90% of regular schools responded that no children with disabilities have been provided with appropriate learning materials from the government, whereas four special schools responded that less than half of the children have. Learning materials in current use at regular schools are for children without disabilities. According to officials in the education department, mathematics and Mongolian textbooks for first, third and sixth grade children with visual, hearing and intellectual disabilities have already been developed. For other children, MECS has been developing the materials (Officials in Education Department, May 2014). Even though the textbooks have been developed, questions remain over how well the training sessions, which cover curriculum development, teaching methods and other teaching materials, prepare teachers to use the textbooks. However, as of November 2014, the research team has not received any feedback on how these textbooks are being used. Teachers at regular schools in Ulaanbaatar also stated that they create teaching and learning materials at their own expense whereas teachers in special schools receive funding for these materials from their schools. In just some schools, the materials prepared by teachers are kept in the school for the later use (October 2015).

Table 9 indicates the number of students per teacher in the surveyed schools. All teachers in the special schools are in charge of fewer than 20 students. However, more than 90%

of teachers in the regular schools are in charge of more than 21 students, with a small proportion (about 4%) of these are teaching more than 41 students, including children with disabilities, together in the same class. There is, therefore, a considerable gap between the special and regular schools. Even within the same types of schools, the numbers of students in a class vary widely, with some teachers in regular schools in charge of fewer than 21 students, while the majority of teachers in regular schools in charge of more. Likewise, there are some teachers who have classes of more than 15 students with disabilities in special schools.

According to interviews, teachers at regular schools usually teach all students by themselves, without support from assistant teachers. Some special schools have assistant teachers for a few classes. There is a legal arrangement that the university graduates from a one-year special education course established in September 2014 are required to work as assistant teachers for both regular and special teachers (Education Department of UB, November 2014).

In summary, teachers at special schools seem to have more training opportunities for teaching children with disabilities and better access to appropriate learning materials for students in smaller-sized classes than teachers at regular schools.

5.3 Teachers' and Parents' Perceptions of Barriers to Better Education for Children with Disabilities

Figures 1, 2, 3 and 4 show perceptions of 19 items by the teachers and parents of children with disabilities at regular and special schools and comparisons of scored perceptions on those 19 items. Regarding the results in Figures 1 and 2, for as many as 17 items for regular school teachers and 16 items for special school teachers, more than half of teachers responded with either 'strongly agree' or 'agree.' More than 80% of the teachers in regular schools chose 'agree' or 'strongly agree' for the following items: 'lack of facilities and equipment,' 'lack of monetary

incentives for teachers,' 'lack of inappropriate monitoring on learning achievement,' and 'lack of experience with children with disabilities.' These items are followed at slightly less than 80% by 'insufficient school budget' and 'lack of INSET'. Teachers in regular schools most strongly agree on the 'lack of monetary incentives for teachers,' 'lack of facilities and equipment' and 'insufficient school budget' as barriers. Items related to learning and teaching such as 'lack of INSET', 'lack of PRESET' and 'inappropriate learning materials' are of lower concern than resource issues including money and facilities. The barriers that cause the least concern for teachers at regular schools are 'children's unwillingness to attend school' and 'lack of understanding by principal.' The regular school teachers score items related to 'understanding' relatively mildly in comparison with other items. However, this group has the highest scores related to concerns on lack of understanding by any of the school stakeholders.

Although similar results appear for teachers in special schools as for teachers in regular schools, there is stronger agreement on different items such as 'lack of understanding by community,' 'lack of PRESET' and 'lack of attendance subsidies.' On the other hand, teachers in special schools are less concerned with 'lack of experience' and 'lack of INSET' than those at regular schools. They are least concerned about 'children's unwillingness to attend school,' 'lack of understanding by teachers' and 'lack of understanding by principal.'

As with the results from the previous sections, the difference may be a result of the considerable gaps between teachers' circumstances. Teachers at special schools are more likely to be surrounded by teachers experienced in working with disabilities, whereas teachers at regular schools receive less support and are more likely to be isolated. Monetary and material items appear to be the strongest concerns of both teacher groups. Even though special schools receive more support, teachers at special schools who have more experience with children with severe disabilities also acknowledge the lack of resources available for children who require additional special support.

Figures 3 and 4 show perceptions of parents at regular and special schools on the 19 barrier items for better education for children with disabilities. Both parental groups have a relatively higher proportion of 'strongly agree' responses than the teacher groups in general. More than half of the parents of children with disabilities at regular schools agree or strongly agree on 14 items perceived as barriers to better education. Of these items, more than 80% of parents chose 'agree' or 'strongly agree' on 'lack of facilities and equipment,' 'lack of monetary incentives for teachers,' 'lack of school attendance subsidies,' and 'insufficient school budget.' Parents also frequently show concern over non-school issues, with 'awareness of non-school personnel,' 'understanding by communities,' 'lack of readiness for further education' and 'understanding by parents of children without disabilities' also receiving a high number of 'strongly agree' responses. Two school-related items that fell below 50% are 'lack of understanding by teachers,' 'lack of understanding by principal' at both special and regular schools. Surprisingly, large class size is not perceived as a barrier by parents as opposed to the teachers in regular schools.

For the parents of children with disabilities at special schools, ten items are perceived as barriers by more than a half of the parents, which is fewer items than the parents at regular schools. The most agreed-on barrier is 'lack of facilities and equipment,' the same as for the other three groups. Other commonly chosen barriers are those mostly related to resource issues at school. For both parents and the teachers at special schools, the actual proportions of 'strongly agree' and 'agree' responses on barriers in each group are similar, with one item, 'lack of understanding by community' ranking as the second highest concern for both groups. In the group interviews, parents of non-schooling children with disabilities unanimously and strongly express concerns over negative experiences of exposure to public curiosity. Negative attitudes towards disabilities may be attributed to insufficient understanding (Yazbeck, McVilly and Parmenter 2004) and superstitious fear (WHO and the World Bank 2011), which could lead people in communities and societies to response-adverse behaviors. The items of least concern

for this last group include ‘lack of understanding by teachers,’ ‘large class size,’ ‘unwillingness of children with disabilities to attend school,’ and ‘lack of understanding’ by school personnel, classmates and parents. Among teacher and parent groups, parents at special schools have the fewest ‘agree’ and ‘strongly agree’ items, which could mean that parents at special schools do not see as many barriers as other groups do.

Table 9 shows the group means for each item by group. It also discloses high scores of monetary and resource barriers, understanding by public and parents of children without disabilities and monitoring and evaluation. While lack of PRESET is highly agreed among all 4 groups, lack of INSET and lack of experience varies among regular and special groups. In addition, lack of understanding by school stakeholders such as teachers, principals and classmates is perceived as a relatively mild issue for the four groups in comparisons to other issues. However, sizable gaps do appear between different groups.

The four different groups, teachers at regular and special schools and parents of children with disabilities at regular and special schools perceive monetary, facility and equipment matters as compelling barriers to quality education. To a greater or lesser extent, it is clear that resource issues are perceived to be serious by all four groups. Regarding particularities, parents perceive barrier items to be more severe, but they do not perceive them as comprehensively as teachers do. This could show that the barrier items are spread throughout the educational system, a place where teachers are able to see more holistically and insightfully than parents. Parents are able to see the education system only partially, but carefully and closely in relation to their own child’s specific condition and learning environment. This gap may generate differences in perceptions between teachers and parents in general. Moreover, most items are scored higher by teachers and parents at regular schools than teachers and parents in special schools. It especially seems that parental perceptions at both schools differ considerably due to low scores by parents at special schools.

The above results are supported by responses from interviews with teachers and parents and school observations. In terms of facilities, teachers at regular schools who take care of children with low vision and speech disabilities do not acknowledge the need for appropriate facilities (October, 2015). In fact, several classes with children with mild disabilities at regular schools seem to manage by putting those children in front, based on our classroom observations. However, the parents of children with physical disabilities and social workers in regular schools claim that the children face hardships in physical education classes and their ability to move around the school (October, 2014 and 2015).

Although there are insufficient levels of facilities even in special schools, the number of 'equipped but unused' responses in regular schools is quite sizable, as noted in Section 5.2.1 School Physical Environment.

In terms of human resources, the teachers and methodologists mentioned that teachers at regular schools work in situations where there are few chances to learn how to teach children with disabilities in the form of either training or exchanges of information (May 2014; October 2014; November 2014). One teacher sometimes refers back to a notebook from a psychology class taken while studying at university, which contains some information on children with disabilities. Another teacher exchanges information on creating appropriate teaching tools from their own home materials with another teacher who teaches a child with a disability. On the other hand, a school social worker said that teachers do not discuss matters with one another on teaching children with disabilities. Although emphasizing the importance of periodical teacher training, a former methodologist, or a head teacher, claimed that teacher training alone cannot improve the quality of education. For teachers to practice the activities learned during training, teaching and learning environments such as class size and materials require management and support (November 2014).

In addition to the lack of training opportunities, almost all teachers point out that there are differences in each child's situations, including the type of disability and their grade. This

constitutes another barrier to collaboration among teachers. One teacher responded that there was no prior information on class composition from either the social worker or school director before this teacher took over the class (May 2014; October 2014; November 2014).

The degrees of parental collaboration vary. Almost all teachers at regular schools state that teachers and parents collaborate. One teacher said that the teacher communicates with the parents of children with disabilities in the same way as other parents (May 2014; October 2014; November 2014; October 2015). Another teacher stated that one parent of a child with a disability and another four children is too busy to communicate with the teacher even though he/she has tried to reach the parent (October 2015), thus implying that there is also parental indifference in education.

The issue of bullying and exclusion is acknowledged by both teachers and parents. One parent of a student with a disability in a regular school in Ulaanbaatar said the child cannot follow the lessons and he/she is bullied by other students. The parent added that the teacher has been trying her best to stop incidences of bullying by other students of her child and the child of another parent (October 2015). The parent of this second child has asked the homeroom teacher for assistance and complained about the bullying situation in a parents' meeting; following this, the situation has become a little better. The parent requested the teacher to move the child's seat to the front of the class because the child does not take any notes during the class and expressed a desire for the child to participate in various school events, saying that the school excludes the child from those activities; however, the school explained this is due to limits on the number of students who can be involved. The parent worries that the child's participation in those events may be a burden to the school, although she wishes the school would accept her child's participation anyway. The parent said she does not have any opportunities for communication with other parents despite her wishes (October 2015). Thus, parents may feel isolated from teachers and other parents.

Another parent of a child with a disability in a special school who used to come to regular school said that the child spent his/her time sitting at the back and using the same learning materials as the regular school children, and was therefore learning very little. This parent was unaware of the existence of a special school for two years (October 2014). The parent of a child with a disability who dropped out at grade 2 revealed that the regular school accepted her child on the condition that parents stay with the child during school (October 2014). A similar statement from an NGO director was that a condition of enrolment is that there are no complaints to the school (October 2014). The parent of a child in an *aimag* who dropped out from a regular school at grade 1 mentioned that the parent understood that school did not want her child's to enroll because the teacher and the school repeatedly reported her daughter's inability to study. Although several parents mentioned the word "burden" in relation to the teachers' task of accepting their children, parents hope that teachers will know how to deal with children with disabilities, as well as be aware of factors that could worsen the situation, such as lack of appropriate learning materials and large class sizes.

On the other hand, in terms of training, special schools can provide a more supportive environment for the teachers and managers to utilize accumulated teachers' knowledge and skills, which could facilitate their in-school collaboration. For all teachers, regardless of whether they work at regular or special schools, there was no PRESET available before 2013. However, teachers at special schools have opportunities for on-the-job training, while teaching materials are stocked in school libraries. Moreover, teachers said that they are able to communicate with parents on their children's condition every day. One teacher also stated that they often depend on parents for assistance with homework (November 2015).

One key finding from this research is that teacher workload is a significant problem. A group interview in a regular school found that teachers want increased salaries and additional assistant teachers in order to help them manage children with disabilities along with other 30 children (May 2014). The teachers in special schools are also seeking to decrease the number of

students per teacher while adding more assistant teachers (October 2014). Despite the accumulation of teaching knowledge and lower numbers of children in comparison with regular schools, teachers in special schools are in charge of children with disabilities that are relatively more severe. The regular schools will, according to some accounts, only accept children with mild disabilities because there are few teachers available with the special skills required. However, there are cases where children with relatively severe disabilities, such as intellectual disabilities and hydrocephalus, have been admitted to regular schools. The teachers without specialized knowledge and skills may feel the demands from the extra work involved in comparison with more conventional teaching work. Even the teachers in special schools do not always know how to deal with all children with disabilities, and children with epilepsy and severe disabilities are often rejected (NGO staff and parents, May and October 2014). The teachers in both special and regular schools seem to have greater responsibilities without an adequate supportive environment.

5.4 Principal Axis Factoring

In order to conduct in-depth analysis on which elements are a concern for teachers and parents in different schools, Principal Axis Factoring (PAF) was performed to analyze related latent variables from 19 barrier items. The value of the Kaiser-Meyer-Olkin is 0.839, which indicates the sampling adequacy for pursuing PAF. Bartlett's test of sphericity with significant chi-square p-value (0.000) also indicates that the data has appropriate correlations for PAF.

Criteria to determine the number of factors are the eigenvalues, the cumulative contribution, and interpretability. Those three factors account for 48.2% of the total variance. The original 19 items were reduced to 11 items by elimination based on loading values below 0.4 and multiple loadings. Three extracted factors are shown with a Promax rotation, and its loadings are indicated in Table 11. Factor one contains barriers of resource such as 'insufficient

school budget,' 'lack of facilities and equipment,' 'lack of monetary incentives for teachers' and 'lack of school attendance subsidies.' Factor two contains barriers of 'understanding' by teachers, parents and classmates. Factor three is comprised of teachers' capabilities such as 'lack of PRESET,' 'lack of INSET' and 'teaching experience with children with disabilities.' Those three factors are named as 'barriers of resource,' 'barriers of understanding' and 'barriers of training and experience,' and their Chronbach alphas are 0.769, 0.752 and 0.711, respectively. These three factors represent strongly correlated barriers perceived by teachers and parents of children with disabilities at regular and special schools.

5.5 Mixed design Analysis of Variance

In the earlier section, the teachers' and parents' perceptions of the 19 barrier items were descriptively analyzed. In this section, the factors 'barriers of resource,' 'barriers of understanding' and 'barriers of training and experience'³⁰ are examined by mixed-design analysis of variance (ANOVA) to identify any significant difference in the levels of barrier perceptions on those three factors within each category. Furthermore, separate ANOVAs³¹ were carried out to examine the effects of the four groups—teacher and parent groups at regular and special schools—on the levels of barrier perceptions.

Table 12 indicates the results of ANOVA³² on barriers of resource, barriers of understanding, and barriers of training and experience. The results showed that all of the effects resched significance in the main effect groups (groups: $F(3, 1123)=20.44$, $\eta_p^2=.052$, $p<.001$; barriers: $F(1.86, 2083.54)=286.29$, $\eta_p^2=.203$, $p<.001$; groups x barriers $F(5.57, 2083.54)=24.22$, $\eta_p^2=.061$, $p<.001$). The scores of three barrier factors, resource, understanding, training and

³⁰ Each barrier factor, such as 'barriers of resource', 'barriers of understanding' and 'barriers of training and experience' is aggregated based on the results of PAF. The values used for ANOVA are mean scores calculated from the variables with more than 0.5 loading values in each factor.

³¹ The means of Likert-scale scores of each item consisted of the factor are used for further analyses, instead of factor scores. The means and standard deviations are presented in Table 10.

³² The results from Greenhouse-Geisser are used due to a violation of Mauchly's test of sphericity.

experience, are significantly different between the teacher and parent groups at regular and special schools (Figure 6). Furthermore, post hoc analyses were conducted within each category on three barriers (Table 13³³). The pairwise tests on the mean comparisons show statistically significant results ($p < .001$), which is that all groups scored on barriers of resource, barriers of training and experience and barriers of understanding in higher order of scores.

Further analyses on the mean comparisons of each barrier between groups were conducted (Table 14 and 15). On barriers of resource, including monetary, facilities and material deficiencies, the parents at regular schools have a higher mean score than those in special schools. The teachers in special schools have marginally higher mean scores than those in regular schools. Although the mean scores of the parents at regular schools differ significantly from the teachers at regular schools ($p < .001$) and the teachers at special schools ($p < .01$), the mean scores of parents at special schools are not significantly different. The parent groups, especially at regular schools, consider barriers of resource as more serious than the other groups.

Regarding the items on barriers of understanding by teachers, parents both of children with and without disabilities and classmates, the mean of teachers at regular schools, are significantly highest (for teachers at special schools and to parents at special schools: $p < .001$; for parents at regular schools: $p < .001$), followed by the mean of parents at regular schools. The means of teachers and parents in special schools are lower than ones in regular schools. The groups have considerably different perceptions on 'lack of understanding' as a barrier to quality education. While the parents at special schools do not consider 'lack of understanding' as a barrier, the teachers and parents at regular schools consider it to be a more serious barrier.

As for the barriers of teacher training and experience, the mean of parents at regular schools is significantly highest (for teachers at special schools: $p < .001$; for parents at special schools: $p < .001$). The mean of teachers at regular schools is the second highest, which is

³³ Groups of teachers and parents at regular schools violated Mauchly's test of sphericity. Therefore, the results of Greenhouse-Geisser tests are used for analyses.

significantly different from the teachers at special schools ($p < .001$) and the parents at regular schools ($p < .01$). Teachers and parents in special schools showed less recognition of lack of teacher training as being a barrier. There is no significant difference between the parents and teachers at regular schools. The teachers and parents at regular schools consider it a more severe barrier than special school groups.

Overall, the results of ANOVA seem to be fundamentally reflected by the current circumstances of the teacher and parent groups in each type of school. For the barriers of three factors, both teachers or parents in regular schools perceive those barriers to be stronger than those groups at special schools. Observable matters such as ‘resource’ and ‘trainings’ are not the only severe barriers at regular schools, but also issues of ‘understanding.’

6. Summary, Discussion and Policy Implications

The provision of equitable and quality education for all children has been agreed on by world leaders in the SDGs and Education 2030 as part of worldwide commitments to resetting global goals. However, particularly in developing countries, ensuring quality education for children with disabilities has not received sufficient attention compared to the broader goal of providing quality education for children in general. From the literature review, the perceptions of parents on barriers to better education for children with disabilities concentrate on communication issues and improving the understanding of teachers and schools, while teachers perceive that key barriers in their attitudes towards teaching children with disabilities are affected by support for teaching and learning. While previous literature has mostly focused on developed country contexts, this study has examined the perceptions of teachers and parents on barriers to quality education for children with disabilities in special and regular schools in Mongolia.

6.1 Summary of Findings

Based on the descriptive comparison utilized for this study, the first finding is that both teachers and parents of children with disabilities in both special and regular schools perceive that there are significant barriers in terms of lack of school facilities, equipment, incentives for teachers and insufficient school budgets, followed by inadequate monitoring, lack of teacher training and lack of learning materials. In comparison to regular schools, teachers and parents of children with disabilities at special schools strongly agree that ‘lack of understanding by communities’ comprises one of the most challenging barriers, along with ‘difficulty of access to school.’

Another finding from the ANOVA analysis, which compared the statistical difference on the perception of barrier factors among teacher and parent groups, is that each group of teachers and parents in special and regular schools perceive the barrier factor of ‘resource including lack of school facilities, equipment, and incentives for the teachers, as well as insufficient school budgets, as the most challenging barriers to better education. This is followed by the barrier factors of ‘teacher training and experience,’ ‘teachers,’ ‘children’s and parents’ understanding,’ all with statistically significant differences. In the group comparison among the above barrier factors, scores of ‘resource’ barriers are all high. No significant differences are detected in the ‘resource’ barrier among teachers in either kinds of school or parents in special schools, but the score of parents in regular schools is significantly higher than any other three groups. In terms of lack of ‘teacher training and experience,’ regular school groups significantly perceive it as a more challenging barrier in comparison with special groups. In terms of comparison of the scores of lack of ‘teachers,’ children’s and parents’ understanding,’ the perceived score by the teachers in regular schools is significantly higher than the other three groups. At the same time, parents in special schools perceive the barrier as significantly lower than the remaining three groups, almost to the level of not considering it to be a barrier.

These quantitative results are also supported by the interview data collected for this research, which found that teachers and parents often cite insufficient school budgets, lack of

monetary incentives for teachers and school equipment to help children with disabilities as barriers. Even if such equipment and facilities exist, these are not always easily accessible. The results could be attributed to the perception that schools are in need of improvement in a range of areas, although this may not necessarily be related to the need for particular resources or equipment. However, the school environment is evidently the top issue perceived by schoolteachers. In addition, lack of teacher training as well as few opportunities for exchanging information and communications are also considered challenging barriers among the teachers, particularly in regular schools. Regarding teacher training, inasmuch as it is important, teachers need supportive environments for teaching activities in order for them to practice the knowledge and skills that they acquired at trainings. Parents in regular schools also disclosed issues related to the inadequate communications between schools and other parents, and feelings of exclusion from the learning environment. Therefore, as perceived by parents and teachers, barriers to better education for children with disabilities comprise a range of very comprehensive issues from resource to understanding. The intensity of these perceptions varies among teachers and parents of children with disabilities in special and regular schools.

6.2 Discussion and Policy Implications

Under the current education policy of enhancing equal opportunities for children with disabilities at any school, comprehensive measures from school facilities for teacher training and collaboration among stakeholders may be required with the involvement of education officials, school managers and teachers, parents and communities.

First, resource barriers such as lack of facilities and equipment, insufficient school budgets, incentives for teachers and school attendance subsidies are perceived as strong barriers. However, these are not extensively highlighted as barriers in preceding studies in developed countries. This could indicate that, for developing countries, even simple equipment is often

unobtainable and schools budgets remain an issue. Qualitative interviews reveal that facilities and equipment are not being fully used to meet the needs of students, and their existence is often unknown to teachers and parents. Such facilities include stairs, dormitories, personal eyeglasses and special equipment for physical education classes—and even school buses and elevators at special schools. Ensuring that facilities and equipment are suited to each child's needs, are convenient, and are utilized by children requires school managers and teachers to plan for the introduction, maintenance and upgrade of new facilities in a way that is accountable to parents and communities. Donors could support such plans in collaboration with the government, educational officials and training institutions. In the same manner, only a handful school management personnel have sufficient knowledge on inclusion and, therefore, school budgets may also require guidance and monitoring on how they can be used to improve education for children with disabilities. Although improving school environments may be considered less deserving of donor support, this aspect needs to be considered so that stakeholders at school sites are able to practice and move forward with the goal of including all children in schools.

Secondly, there need to be more opportunities for PRESET and INSET for all teachers. The contents, length and periods of teacher trainings need to be considered and planned well. Partners in the process may include The Ministry of Education, Culture, Science, and Sports (MECSS), the Education Department and Education and Culture Department (ECD) and the Institute of Teacher's Professional Development in cooperation with the Mongolian State University of Education and education specialists in special schools. These partner organizations, particularly, may need to undertake new initiatives utilizing feedback from schools. Under the inclusive education policy, all teachers, including social workers and managers need to fortify their practical knowledge and skills and feel confident in diversified schools. The trainings need to emphasize practical aspects so that teachers can become more confident in welcoming all children, with substantive regular sessions so as to create momentum and teachers can keep updating their knowledge and skills. Most importantly, effective teaching and teachers' attitudes

that are learned and shared through training and experience could be reinforced by improved and supportive teaching environments—a point disclosed in the interviews. As crucial as teacher training is, by itself, it may not improve quality education for all children. In order for teachers to implement the effects of trainings, it is extremely important that teaching and learning activities for all children are recognized as being central. Generating an appropriate learning environment requires support and facilitation utilizing all available means.

In addition, cooperation among stakeholders may need to be strengthened in order to enhance understanding and develop children's learning and growth. In terms of cooperation between teachers and parents, both parties at regular schools may need to communicate better about activities, progress and other issues on a daily basis through conversation or notes in order to build mutual reliance and trust. As a way of building mutual trust, schools should regularly invite parents to be involved in decision-making processes in order to provide adequate and effective education. Teachers, including social workers and managers, need to remember that parents tend to perceive teachers as a group of intellectuals with special terminology, making it difficult to approach them—particularly as a group. For the purpose of raising children academically and non-academically, parental cooperation is required to address factors that schools and teachers are not able to cover or follow up on for any child with in need of help. Schools could generate better understanding and involvement with their communities through school events and meetings. Where teachers feel isolated, the school manager or social workers may need to formulate teacher groups to exchange information, as well as develop lesson plans and materials. This applies particularly to teachers who have teaching experience of children with disabilities to share their abundant resources of knowledge, techniques and teaching materials. As teachers are required to communicate and exchange information within and between schools, such learning groups could go beyond school individuals and involve other schools periodically, as well as developing relationships between regular and special schools.

Furthermore, the policy implications of providing quality education for all children may lead to increased workloads for teachers in relation to children with disabilities. All stakeholders may be required to support teachers in ways that allow them to focus on teaching and decrease their concerns over workloads. Social workers and managers need to arrange additional information and financial resources, as well as personnel such as assistant teachers and volunteers, thus allowing teachers to spend more time on teaching preparation and follow-up. Communities may be mobilized to assist classes and volunteer in school festivals and other local events to increase involvement in improving the school and raising awareness. MECSS could consider compensating teachers for additional work through financial incentives or personnel resources.

In terms of the family aspects, parents and guardians may require additional public or organized support. Caring for children with disabilities is demanding for parents and guardians, and responsibilities may include arranging transportation, attending classes with children all day and helping them with their homework. However, with little systematic support available, some parents have to quit their jobs and live on welfare or, otherwise, abandon the idea of their child receiving an education. The government may need to acknowledge that meeting these needs may lie outside the individual capacities of some families, and that many families of children with disabilities are in precarious situations. Although some support for families may lie beyond the scope of the educational sector, MECSS, in cooperation with other ministries such as the Ministry of Social Welfare and Labour, and the Ministry of Health, may need to begin piloting systematic support to encourage families to send their children to schools.

Lastly, action to address the implications of this study may require substantial support from multilateral, bi-lateral and NGO donors in a rigorously coordinated and collaborative manner. In comparison to Mongolia's fairly established education system in general, education for children with disabilities and other marginalized children has received considerably less attention, and within MECSS there are few specialized personnel. In such circumstances, partial

support, such as increasing teacher training, may not be able to bring about effective outcomes. This will require comprehensive and intensive program support and coordination among donors such as global funding systems (or pool funds). For example, projects on introducing child-centered methods to teachers could be provided by JICA in conjunction with the government and MECSS officials. This could be used to promote inclusion and lead to future projects with JICA to develop teacher training for teaching children with disabilities. Collaboration among donors and linking projects could lead to mutually effective and successful programs for improving education for all children rather than making education officials bustle from one project to another.

Regarding the implications for future studies, there are a few suggestions. This paper demonstrated both comprehensive and general outcomes as the first paper on the collected data based on Mongolia's long background history of special education. Further analyses could compare rural schools with schools in Ulaanbaatar. Due to considerable differences between Ulaanbaatar and other regions, this may lead to beneficial research outcomes and policy implications. In addition, target-specific studies may be able to explore individual interrelated factors. For example, the relationship between educational components and teachers' perceptions could indicate new mechanisms for teacher attitudes and efficacy in providing better education to all children. In-depth analyses may lead to detailed and concrete measures for quality education for all. Future studies could also explore ways of measuring children's learning. During interviews, the authors of this study found that, based on stakeholder perceptions, children with disabilities in both regular and special schools are not learning sufficiently. A future study could investigate their learning progress and develop policy implications on learning outcomes.

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Table 1. Sampling Distribution

City or Aimag	Province	District	Regular School				Special School					
			Number of Schools	Number of Teachers		Number of Parents		Number of Schools	Number of Teachers		Number of Parents	
				Experience of CwD	Experience of CwoD	Parents of CwD	Parents of CwoD		Experience of CwD	Experience of CwoD	Parents of CwD	Parents of CwoD
Capital	Ulaanbaatar	Bayangol	3	19	6	43	35	1	11	0	11	0
		Bayanzurkh	4	16	18	28	24	1	11	1	10	0
		Bagakhangai	3	4	4	0	6	0	0	0	0	0
		Baganuur	3	10	7	6	12	0	0	0	0	0
		Chingeltei	3	16	8	11	0	0	0	0	0	0
		Khan-uul	3	10	11	12	16	1	12	2	10	0
		Nalaikh	2	11	7	12	14	0	0	0	1	0
		Sukhbaatar	1	12	14	19	27	3	31	2	29	0
		Songinokhairkhan	2	15	8	16	17	0	0	0	0	0
	Total	24	113	83	147	151	6	65	5	61	0	
Aimag	Dornod	Bayandun	1	10	2	15	0	0	0	0	0	
		Kherlen	2	15	25	30	31	0	0	0	0	0
		Sergelen	1	5	2	4	4	0	0	0	0	0
		Tsagaan-Ovoo	1	7	4	2	14	0	0	0	0	0
	Dornogovi	Sainshand	3	11	25	21	23	0	0	0	0	0
		Zaarin-Uud	1	7	7	8	7	0	0	0	0	0
		Zuunbayan	1	5	3	6	7	0	0	0	0	0
	Hovsgul	Murun	7	66	34	82	72	0	0	0	0	0
		Renchinlumbe	1	12	4	11	9	0	0	0	0	0
		Tsagaannuur	1	10	0	16	25	0	0	0	0	0
Ulaan-Uul		1	15	1	33	28	0	0	0	0	0	
Uvs	Tarialan	1	15	2	13	13	0	0	0	0	0	
	Ulaangom	3	41	13	40	40	0	0	0	0	0	
	Umnogovi	1	10	7	13	13	0	0	0	0	0	
	Total	25	229	129	294	286	0	0	0	0	0	

Source: 2014 JICA-RIM/Survey.

Note: a. CwD = Children with Disability

b. CwoD = Children without Disability

Table 2. Demographic Information of Teachers

		Regular School Teachers		Special School Teachers		All teachers			
		Freq.	%	Mean	(SD.)	Freq.	%	Mean	(SD.)
UB or Aimag	UB	197	(35.5)			70	(100.0)		
	Aimag	358	(64.5)			0	(0.0)		
Gender	Male	58	(10.5)			14	(20.0)		
	Female	497	(89.6)			56	(80.0)		
Age				37.39	(9.1)			39.56	(10.9)
Class size				30.15	(6.3) a			10.62	(3.2) b
Educational level	G1-5	0	(0.0)			2	(2.9)		
	G6-12	5	(0.9)			1	(1.4)		
	Vocational education	44	(7.9)			5	(7.1)		
	Bachelor or above	506	(91.2)			62	(88.6)		
Training on education (Both Pre and In-service)	Yes	149	(37.1)			26	(26.9)		
	No	406	(62.9)			44	(73.2)		
Training on education for disabilities	PRESET	41	(7.4)			8	(11.4)		
	INSET	169	(30.5)			57	(81.4)		
	None	345	(62.2)			5	(7.1)		
Experience with CWDs	No	196	(35.3)			4	(5.7)		
	For children with mild disability	223	(40.2)			1	(1.4)		
	For children with severe disabilities	136	(24.5)			65	(92.9)		
Observation									
		555				70			
								625	

Source: 2014 JICA-RI/IRIM Survey.

Note: a. n=440 Teachers in charge of a particular class only

b. n=50 Teachers in charge of a particular class only

c. n=490 Teachers in charge of a particular class only

Table 3. Demographic Information on Parents of School Children

		Regular School				Special School				All School			
		Obs.	(%)	Mean	(SD.)	Obs.	(%)	Mean	(SD.)	Freq.	(%)	Mean	(SD.)
Residents (UB or Aimag)	UB	147	(33.3)			61	(100.0)			208	(41.4)		
	Aimag	294	(66.7)			0	(0.0)			294	(58.6)		
Gender of the child	Boy	249	(56.5)			39	(63.9)			288	(57.4)		
	Girl	192	(43.5)			22	(36.1)			214	(42.6)		
Age of the child				8.51	(1.9)			9.56	(2.8)			8.63	(2.0)
Grade of the child				2.90	(1.4)			2.70	(1.4)			2.88	(1.4)
Types of impairment	Hard of hearing	36	(8.2)			6	(9.8)			42	(8.4)		
	Deaf	3	(0.7)			3	(4.9)			6	(1.2)		
	Oral and speech disabilities	79	(17.9)			6	(9.8)			85	(16.9)		
	Low vision	114	(25.9)			7	(11.5)			121	(24.1)		
	Blind	2	(0.5)			2	(3.3)			4	(0.8)		
	Physical and mobility disabilities	90	(20.4)			2	(3.3)			92	(18.3)		
	Intellectual disabilities	16	(3.6)			12	(19.7)			28	(5.6)		
	Learning disabilities and slow learner	24	(5.4)			1	(1.6)			25	(5.0)		
Severe and multiple disabilities		77	(17.5)			22	(36.1)			99	(19.7)		
The level of disability	Mild	343	(77.8)			22	(36.1)			365	(72.7)		
	Severe	98	(22.2)			39	(63.9)			137	(27.3)		
Grade repeating	Yes	25	(5.7)			4	(6.6)			29	(5.8)		
	No	416	(94.3)			57	(93.4)			473	(94.2)		
Gender of the parents	Male	59	(13.4)			14	(23.0)			73	(14.5)		
	Female	382	(86.6)			47	(77.1)			429	(85.5)		
Education	Incomplete primary	16	(3.6)			1	(1.6)			17	(3.4)		
	Primary(G1-5)	21	(4.8)			0	(0.0)			21	(4.2)		
	Middle + Sec(G6-12)	249	(18.1)			42	(68.9)			291	(57.7)		
	Vocational education	38	(8.6)			5	(8.2)			43	(8.6)		
	Bachelor or above	117	(26.5)			13	(21.3)			130	(25.9)		
Expectation of parents for child education	Primary(G1-5)	8	(1.8)			1	(1.6)			9	(1.8)		
	Middle school	13	(3.0)			3	(4.9)			16	(3.2)		
	Secondary school	81	(18.4)			15	(24.6)			96	(19.1)		
	Vocational education	19	(4.3)			5	(8.2)			24	(4.8)		
	Bachelor	220	(49.9)			25	(41.0)			245	(48.8)		
	Master or above	100	(22.7)			12	(19.7)			112	(22.3)		
Observation		441				61				502			

Source: 2014 JICA-RI/IRIM Survey.

Table 4. Number of Schools with Appropriate School Facilities for CwDs (Special School/Regular School) (Percentage in Parenthesis)

	Entrance Slope		Appropriate Classroom Door		Accessible Toilets		Appropriate Access to Upstairs		School Bus	
	Special	Regular	Special	Regular	Special	Regular	Special	Regular	Special	Regular
No	2 (33.3)	22 (44.9)	3 (50.0)	36 (73.5)	5 (83.3)	36 (73.5)	5 (83.3)	45 (91.8)	0 (0.0)	45 (91.8)
Not Used	0 (0.0)	7 (14.3)	0 (0.0)	4 (8.2)	0 (0.0)	5 (10.2)	0 (0.0)	2 (4.1)	0 (0.0)	3 (6.1)
Yes	4 (66.7)	20 (40.8)	3 (50.0)	9 (18.4)	1 (16.7)	8 (16.3)	1 (16.7)	2 (4.1)	6 (100.0)	1 (2.0)
Observations	6	49	6	49	6	49	6	49	6	49

Source: 2014 JICA-RI/IRIM Survey.

Table 5. School Transportation (Percentage in Parenthesis)

	Regular	Special
Yes	9 (2.0)	8 (13.1)
No access to use	9 (2.0)	10 (16.4)
No	423 (95.9)	43 (70.5)
Observations	441	61

Source: 2014 JICA-RI/IRIM Survey.

Table 6. Special Support (Percentage in Parenthesis)

	From government		From donor			
	In the present		In the past		In the present	
	Special	Regular	Special	Regular	Special	Regular
YES	4 (66.7)	1 (2.0)	5 (83.3)	7 (14.3)	5 (83.3)	3 (6.1)
NO	2 (33.3)	48 (98.0)	1 (16.7)	42 (85.7)	1 (16.7)	46 (93.9)
Observations	6	49	6	49	6	49

Source: 2014 JICA-RI/IRIM Survey.

Table 7. Teacher's Training (Percentage in Parenthesis)

		Regular	Special	All Schools	
Preset training	Level ^a	Yes	178 (32.1)	29 (41.4)	207 (33.1)
		No	377 (67.9)	41 (58.6)	418 (66.9)
		Diploma	22 (12.4)	8 (27.6)	30 (14.5)
		Certificate	95 (55.4)	17 (58.6)	112 (54.1)
		Other	61 (34.3)	4 (13.8)	65 (31.4)
Regular training	Frequency ^b	Yes	455 (82.0)	60 (85.7)	515 (82.4)
		No	100 (18.0)	10 (14.3)	110 (17.6)
		Once every 6 months	238 (52.3)	39 (65.0)	277 (53.8)
		Once a year	163 (35.8)	17 (28.3)	180 (35.0)
		Once every 2 years	21 (4.6)	1 (1.7)	22 (4.3)
		Once every 3 years or more	33 (7.3)	3 (5.0)	36 (7.0)
Training on disability education	The most recent training ^c	Preset	41 (7.4)	8 (11.4)	49 (7.8)
		Inset	169 (30.5)	57 (81.4)	226 (36.2)
		No	345 (62.2)	5 (7.1)	350 (56.0)
	The most recent training ^c	Less than 2 years ago	88 (41.9)	57 (87.7)	145 (52.7)
		2-5 years ago	65 (31.0)	5 (7.7)	70 (25.5)
		5-10 years ago	46 (21.9)	0 (0.0)	46 (16.7)
		More than 10 years ago	11 (5.2)	3 (4.6)	14 (5.1)
	Training span ^c	1-6 days	168 (80.0)	53 (81.5)	221 (80.4)
		7-14 days	22 (10.5)	6 (9.2)	28 (10.2)
15-30 days		8 (3.8)	0 (0.0)	8 (2.9)	
31 days and more		12 (5.7)	6 (9.2)	18 (6.6)	
Observations		555	70	625	

Source: 2014 JICA-RI/IRIM Survey.

Note: a. n=178(Regular), 29(Special)

b. n=455 (Regular), 60 (Special)

c. n=210(Regular), 65(Special)

Table 8. Specially Designed Learning Materials (Percentage in Parenthesis)

	Special	Regular	All Schools
No	1 (16.7)	45 (91.8)	46 (83.6)
Less than a half	4 (66.7)	1 (2.0)	5 (9.1)
All CwDs	1 (16.7)	3 (6.1)	4 (7.3)
Observations	6	49	55

Source: 2014 JICA-RI/IRIM Survey.

Table 9. Number of Teachers by Class Size (Percentage in Parenthesis)

	Special	Regular	All Schools
1 to 10 students	28 (56.0)	4 (0.9)	32 (6.5)
11 to 20 students	22 (44.0)	19 (4.3)	41 (8.4)
21 to 30 students	0 (0.0)	192 (43.6)	192 (39.2)
31 to 40 students	0 (0.0)	208 (47.3)	208 (42.5)
41 to 50 students	0 (0.0)	17 (3.9)	17 (3.5)
Observations	50	440	490

Source: 2014 JICA-RI/IRIM Survey.

Table 10. Mean Scores and Standard Deviation of Barrier Perception by Groups

	Teacher (Regular)		Teacher (Special)		Parents (Regular)		Parents (Special)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Lack of monetary incentives for teachers	4.26	0.92	4.07	1.01	4.51	0.86	4.33	0.91
Lack of facilities and equipment	4.23	0.85	4.31	0.77	4.64	0.74	4.33	1.15
Insufficient school budget	4.07	0.96	4.26	0.90	4.40	0.90	4.25	1.22
Lack of school attendance subsidies	3.90	1.03	3.96	1.01	4.29	1.19	4.05	1.44
Difficulty of access to school	3.63	1.14	3.91	1.11	2.93	1.67	3.44	1.65
Lack of readiness for further education	3.90	0.92	3.91	1.02	4.08	1.17	3.85	1.31
Lack of understanding by community	3.82	1.03	4.21	0.85	4.10	1.13	4.13	1.36
Inappropriate monitoring of learning achievement	4.05	0.91	4.01	0.96	4.27	1.06	3.61	1.49
Inappropriate learning materials	3.94	1.05	3.97	1.01	3.61	1.37	2.59	1.49
Large class size	3.81	1.16	3.27	1.50	3.28	1.48	1.75	1.18
Lack of INSET	4.01	0.99	3.17	1.26	4.14	1.07	3.34	1.49
Lack of experience with CWD	3.99	0.98	3.24	1.23	4.06	1.19	3.03	1.65
Lack of PRESET	3.91	1.08	4.00	1.02	4.03	1.12	3.75	1.35
Lack of understanding by parents of CWOD	3.78	1.00	3.80	1.12	4.01	1.22	3.97	1.28
Lack of understanding by parents of CWD	3.66	1.05	3.16	1.31	3.43	1.41	2.30	1.54
Lack of understanding by classmates	3.63	1.07	3.16	1.31	3.36	1.41	2.18	1.38
Lack of understanding by teachers	3.31	1.21	2.50	1.24	2.85	1.40	1.77	1.10
Lack of understanding by school principal	3.28	1.21	2.59	1.45	3.50	1.21	2.69	1.37
CWD's unwillingness to attend school	2.90	1.29	2.71	1.33	2.17	1.29	1.92	1.29

Source: JICA-RI/IRIM Survey.

Likert Scale: 1. Strongly disagree, 2. Disagree, 3. Neutral, 4. Agree, 5. Strongly Agree

Table 11. Factor Analysis

S.N.	Named Factors	Variables	Factor			Communalities
			1	2	3	
1		Insufficient school budget	0.80	-0.01	-0.04	0.29
2	Resource barriers	Lack of facilities and equipment	0.75	0.02	0.00	0.60
3		Lack of monetary incentives for teachers	0.56	-0.03	0.24	0.57
4		Lack of school attendance subsidies	0.53	-0.01	0.01	0.50
5		Lack of understanding by classmates	-0.02	0.77	-0.05	0.38
6	Barriers to understanding	Lack of understanding by parents of CWODs	0.00	0.74	-0.03	0.66
7		Lack of understanding by parents of CWODs	0.25	0.56	-0.09	0.41
8		Lack of understanding by teachers	-0.21	0.55	0.23	0.56
9	Barriers to training and experience	Lack of INSET	-0.02	-0.04	0.84	0.53
10		Lack of PRESET	0.18	-0.04	0.52	0.38
11		Lack of experience with CWODs	0.06	0.19	0.50	0.42
Eigenvalue			3.85	1.91	1.03	
Chronbach alphas			0.769	0.752	0.711	
Percentage of variance experienced			30.47	12.75	4.95	

Source: JICA-RI/IRIM Survey.

Table 12. Results of ANOVA on Barriers to Resources, Understanding and Teacher's Training

Source	SS	df	MS	F	p	η^2
Between Subject						
Groups ^a	25.344	3	8.448	20.444	.000	.052
Error	464.060	1123	.413			
Within Subject						
3 barriers ^b	260.103	1.855	140.192	286.294	.000	.203
3 barriers x groups	66.005	5.566	11.859	24.217	.000	.061
Error (Sub. Und. Train.)	1020.265	2083.541	.490			
Total	1835.778	3216.962				

Source: 2014 JICA-RI/IRIM Survey.

Note: a. Groups "Teachers at regular schools", "Teachers at special schools", "Parents at regular schools", "Parents at special schools"

b. 3 barriers means "Resource barriers", "Barriers to understanding", "Barriers to Teacher's Training"

Table 13: Pairwise Tests on the Mean Comparison between Subjects on 3 barriers

(I) within	(J) within	Difference of Mean			95% Confidence Interval ^a	
		(I-J)	Standard Error	P-Value ^a	Lower Limit	Upper Limit
Lack of Resources	Lack of Understanding	1.063***	.048	.000	.947	1.178
	Lack of Teacher's Training	.517***	.038	.000	.427	.608
Lack of Understanding	Lack of Resources	-1.063***	.048	.000	-1.178	-.947
	Lack of Teacher's Training	-.545***	.047	.000	-.657	-.433
Lack of Teacher's Training	Lack of Resources	-.517***	.038	.000	-.608	-.427
	Lack of Understanding	.545***	.047	.000	.433	.657

Source: 2014 JICA-RI/IRIM Survey.

Based on the Estimated Marginal

Note: ***. Significant at 99% level, **. Significant at 95% level, *. Significant at 90% level

a. Adjustment of multiple comparison: Bonferroni

Table 14: Descriptive Statistics on the Barrier Perceptions by Groups

		Number of Observations	Mean of Score	Standard Deviation	Standard Error	Minimum Value	Maximum Value
Lack of Resources	Teacher at Regular School	555	4.1140	0.76	.03206	1.00	5.00
	Teacher at Special School	70	4.1500	0.68	.08162	1.00	5.00
	Parents at Regular School	441	4.4632	0.68	.03226	1.75	5.00
	Parents at Special School	61	4.2377	0.85	.10924	1.50	5.00
	Total	1127	4.2595	0.74	.02219	1.00	5.00
Lack of Understanding	Teacher at Regular School	555	3.5964	0.87	.03713	1.00	5.00
	Teacher at Special School	70	3.1536	0.88	.10528	1.00	5.00
	Parents at Regular School	441	3.4104	0.98	.04662	1.00	5.00
	Parents at Special School	61	2.5533	1.01	.12885	1.00	4.75
	Total	1127	3.4397	0.96	.02846	1.00	5.00
Lack of Teacher's Training	Teacher at Regular School	555	3.9688	0.84	.03583	1.00	5.00
	Teacher at Special School	70	3.4714	0.79	.09435	1.67	5.00
	Parents at Regular School	441	4.0779	0.86	.04116	1.00	5.00
	Parents at Special School	61	3.3770	1.24	.15864	1.00	5.00
	Total	1127	3.9485	0.90	.02666	1.00	5.00

Source: 2014 JICA-RI/IRIM Survey.

Likert Scale: 1. Strongly disagree, 2. Disagree, 3. Neutral, 4. Agree, 5. Strongly Agree

Table 15: Pairwise Tests on the Mean Comparison between Groups

Dependent Variable	(I)	(J)	Difference of Mean (I-J)	Standard Error	P-Value ^a	95% Confidence Interval	
						Lower Limit	Upper Limit
Lack of Resources	Teacher at Regular School	Teacher at Special School	-.03604	.09224	1.000	-.2798	.2077
		Parents at Regular School	-.34919	.04639	.000***	-.4718	-.2266
		Parents at Special School	-.12374	.09810	1.000	-.3830	.1355
	Teacher at Special School	Teacher at Regular School	.03604	.09224	1.000	-.2077	.2798
		Parents at Regular School	-.31315	.09357	.005**	-.5604	-.0659
		Parents at Special School	-.08770	.12738	1.000	-.4244	.2489
	Parents at Regular School	Teacher at Regular School	.34919	.04639	.000***	.2266	.4718
		Teacher at Special School	.31315	.09357	.005**	.0659	.5604
		Parents at Special School	.22545	.09934	.141	-.0371	.4880
	Parents at Special School	Teacher at Regular School	.12374	.09810	1.000	-.1355	.3830
		Teacher at Special School	.08770	.12738	1.000	-.2489	.4244
		Parents at Regular School	-.22545	.09934	.141	-.4880	.0371
Lack of Understanding	Teacher at Regular School	Teacher at Special School	.44282	.11726	.001***	.1329	.7527
		Parents at Regular School	.18597	.05898	.01**	.0301	.3418
		Parents at Special School	1.04312	.12471	.000***	.7135	1.3727
	Teacher at Special School	Teacher at Regular School	-.44282	.11726	.001***	-.7527	-.1329
		Parents at Regular School	-.25686	.11895	.186	-.5712	.0575
		Parents at Special School	.60029	.16193	.001***	.1723	1.0283
	Parents at Regular School	Teacher at Regular School	-.18597	.05898	.01**	-.3418	-.0301
		Teacher at Special School	.25686	.11895	.186	-.0575	.5712
		Parents at Special School	.85715	.12629	.000***	.5234	1.1909
	Parents at Special School	Teacher at Regular School	-1.04312	.12471	.000***	-1.3727	-.7135
		Teacher at Special School	-.60029	.16193	.001***	-1.0283	-.1723
		Parents at Regular School	-.85715	.12629	.000***	-1.1909	-.5234
Lack of Teacher's Training	Teacher at Regular School	Teacher at Special School	.49734	.11091	.000***	.2042	.7905
		Parents at Regular School	-.10908	.05578	.305	-.2565	.0383
		Parents at Special School	.59172	.11795	.000***	.2800	.9035
	Teacher at Special School	Teacher at Regular School	-.49734	.11091	.000***	-.7905	-.2042
		Parents at Regular School	-.60642	.11250	.000***	-.9038	-.3091
		Parents at Special School	.09438	.15316	1.000	-.3104	.4992
	Parents at Regular School	Teacher at Regular School	.10908	.05578	.305	-.0383	.2565
		Teacher at Special School	.60642	.11250	.000***	.3091	.9038
		Parents at Special School	.70080	.11945	.000***	.3851	1.0165
	Parents at Special School	Teacher at Regular School	-.59172	.11795	.000***	-.9035	-.2800
		Teacher at Special School	-.09438	.15316	1.000	-.4992	.3104
		Parents at Regular School	-.70080	.11945	.000***	-1.0165	-.3851

Source: 2014 JICA-RI/IRIM Survey.

Note: ***. Significant at 99.9% level, **. Significant at 99% level, *. Significant at 95% level

a. Adjustment of multiple comparison: Bonferroni

Figure 1: Perception on the Barriers of Children with Disabilities for Teachers in Regular Schools

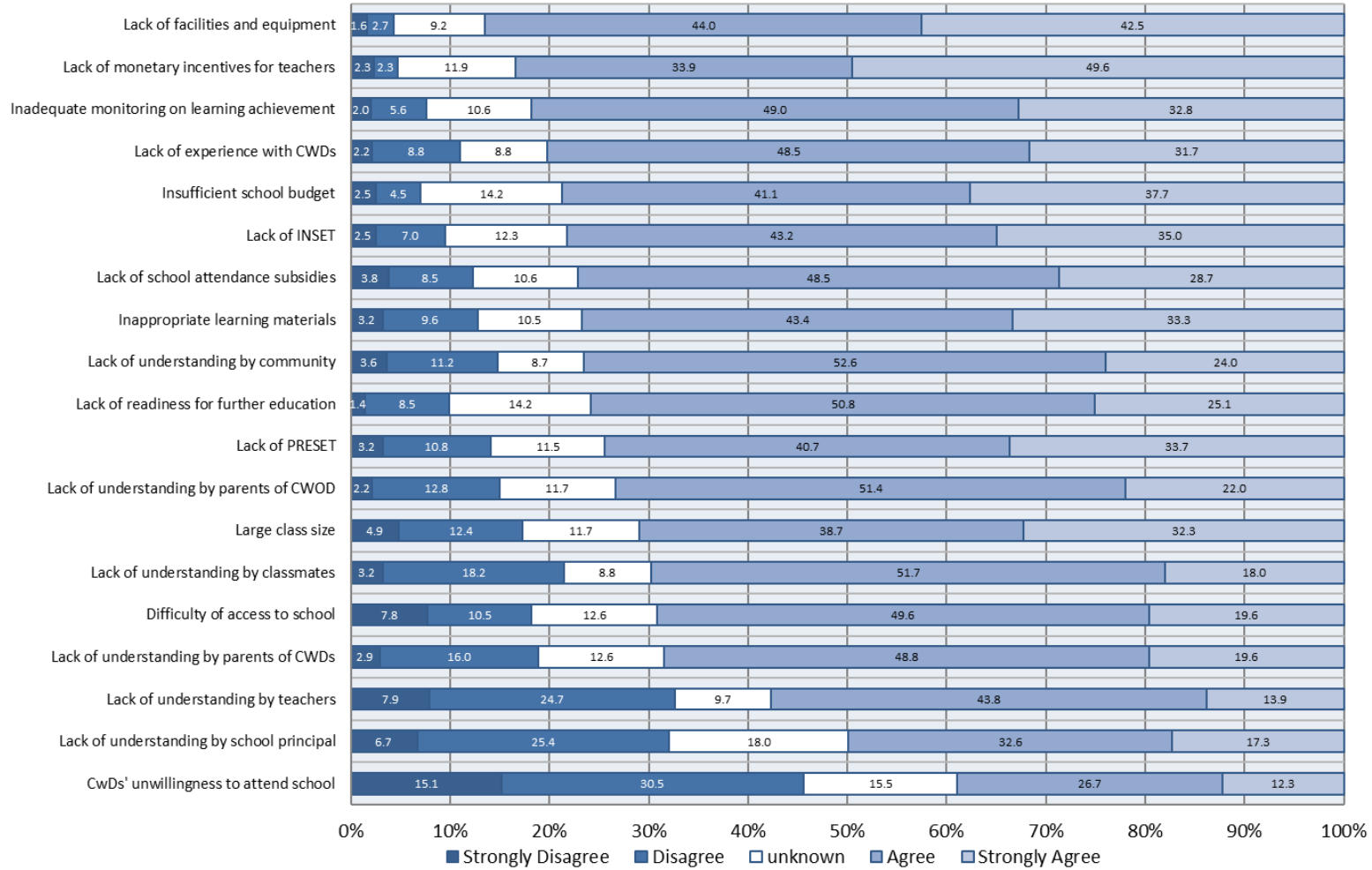


Figure 2: Perception on the Barriers of Children with Disabilities for Teachers in Special Schools

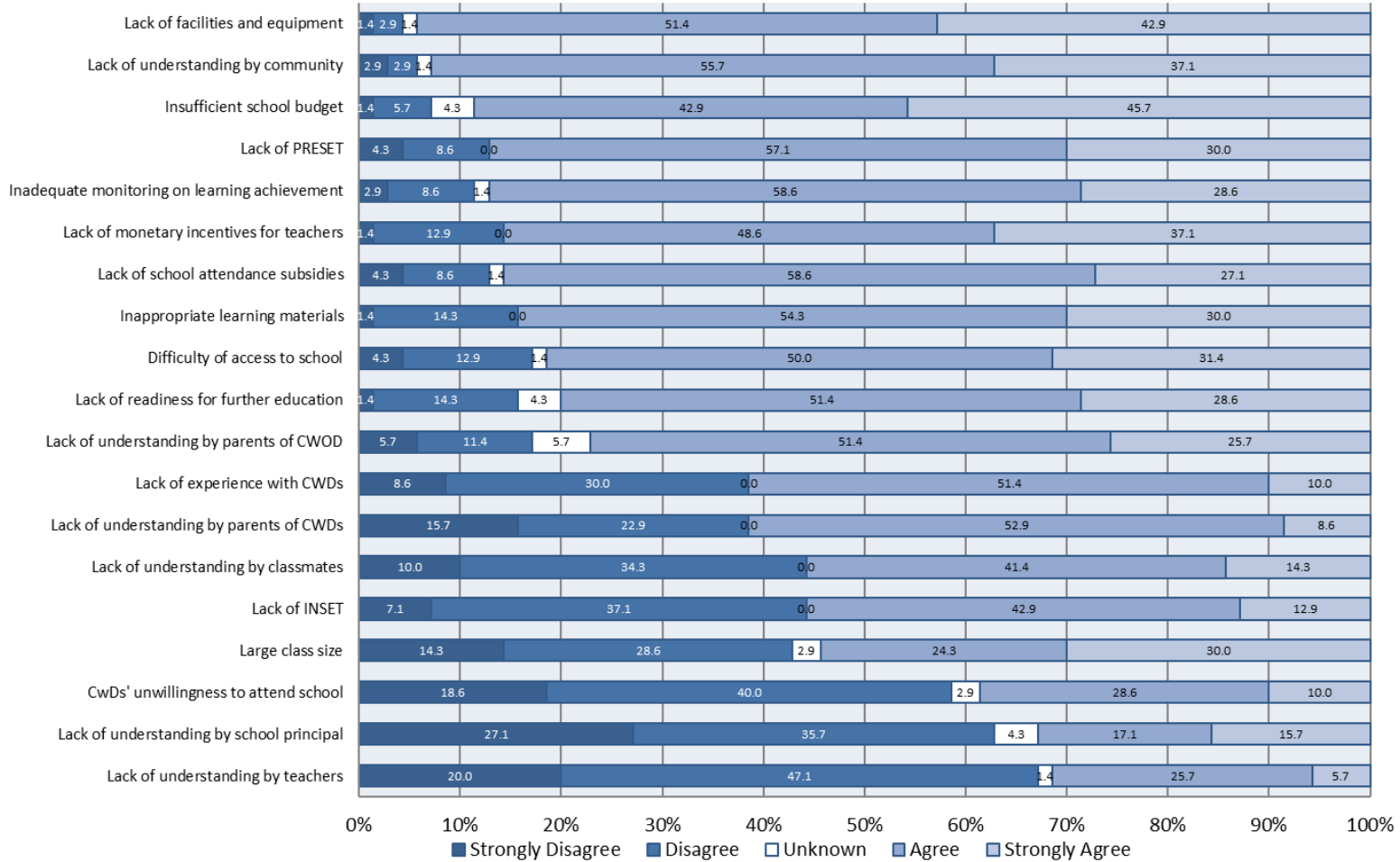


Figure 3: Perception on the Barriers of Children with Disabilities for Parents in Regular Schools

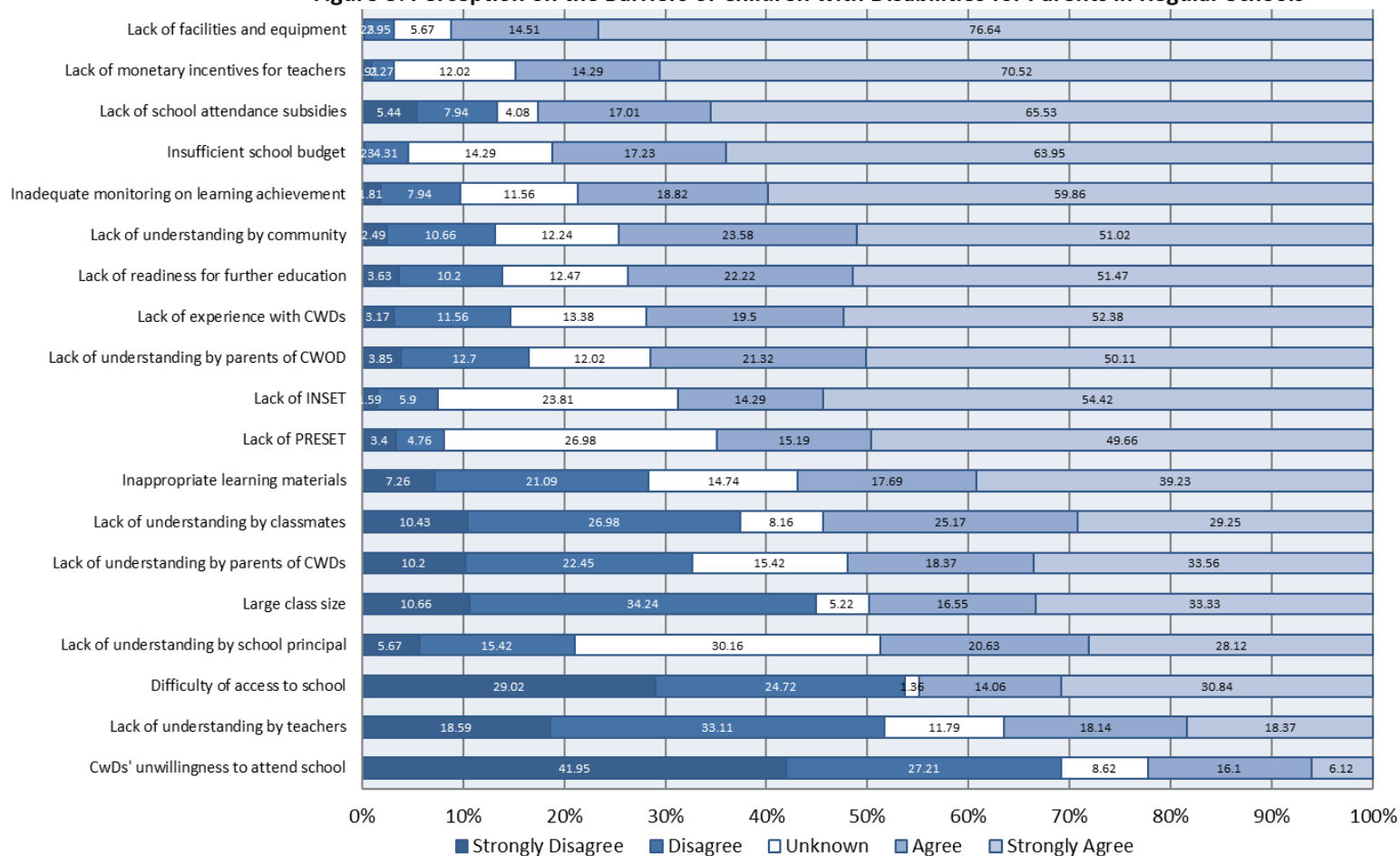


Figure 4: Perception on the Barriers of Children with Disabilities for Parents in Special Schools

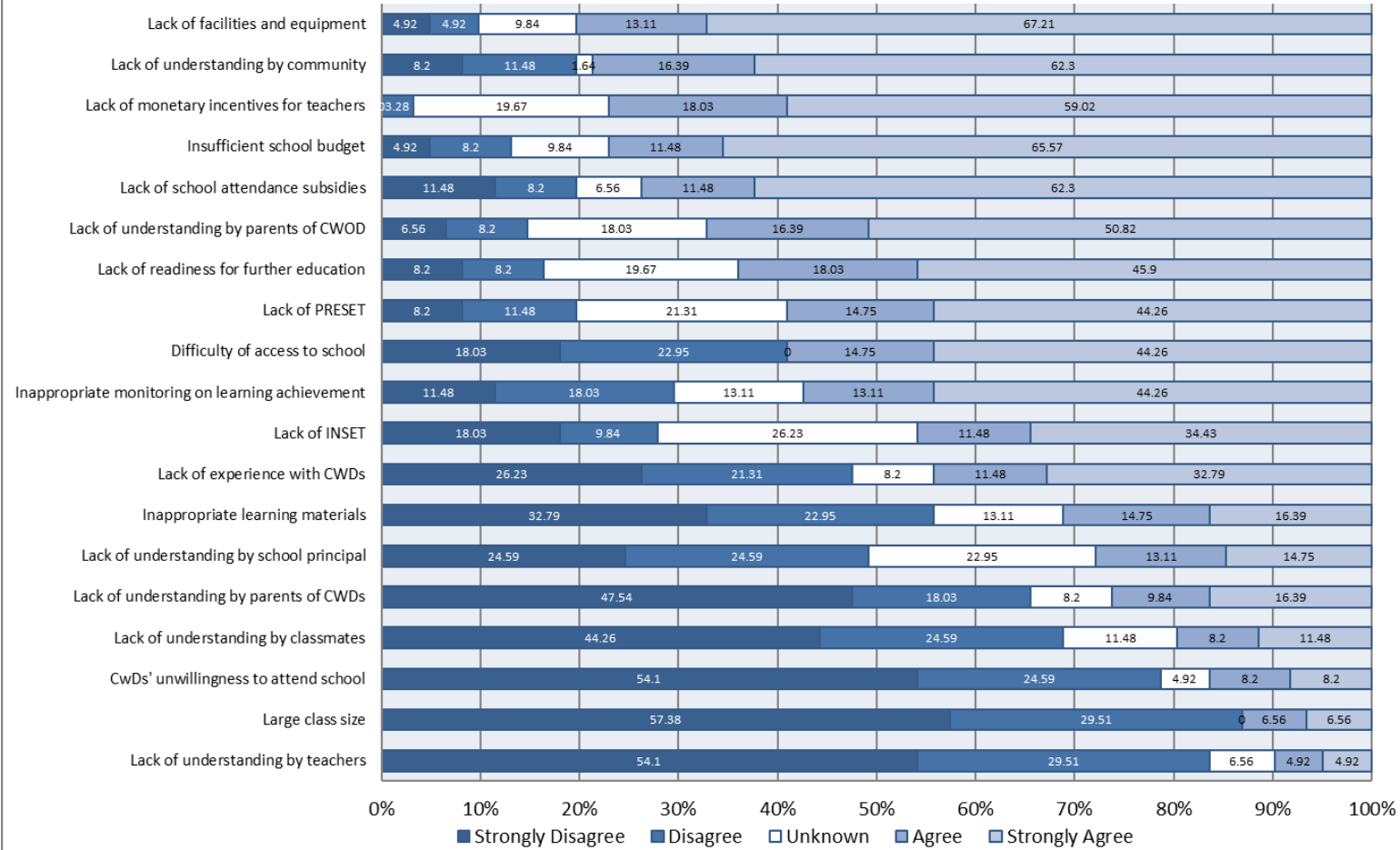
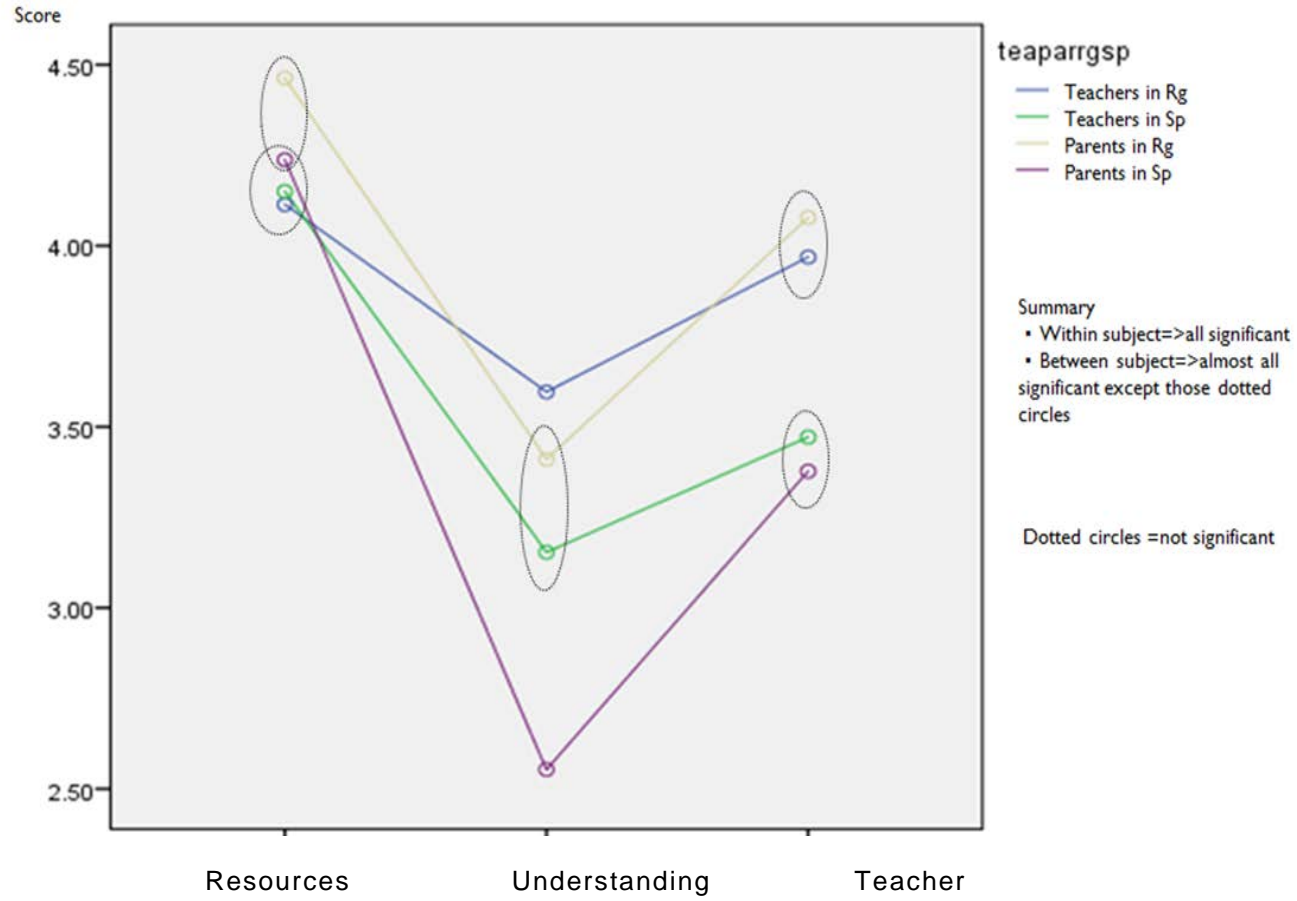


Figure 5: Factorial ANOVA



Abstract (in Japanese)

要約

1990年のEFAの開始以降、途上国における初等教育へのアクセスは著しい向上を遂げたが、未だ世界には5700万人の非就学児がいるとされ、その3分の1は障害児であると推計されている。1994年のサラマンカ宣言、2006年の障害者権利条約の発効等のインクルーシブ教育推進の国際潮流を背景に、途上国においても障害児の教育へのアクセス及び質の改善が試みられている。しかし、途上国において、就学している障害児はただ教室に座っているだけという、全ての子供を包摂するという理念からは程遠い現況になっているとの報告がある。本論文は、インクルーシブ教育政策を推進するモンゴル国において、障害児が質の高い教育を享受するには何が阻害要因となっているか、学校現場である特別支援学校及び普通学校の教員、障害児の親からの評価について、実証分析を行った。

まず、記述統計における分析では、阻害要因に関する質問のうち、特別支援学校及び普通学校の教員、障害児の親の双方が、設備の未整備や学校の予算・教員の特別手当等の不足等が、障害児の就学にとって高い障壁であると捉えていることが分かった。更に、教員側は、学習成果のモニタリング方法、教員の研修不足などが高い阻害要因であると考えていることも確認された。また、特別支援学校の教員及び親の双方が、地域の理解不足についても、高い阻害要因となっていると認識していることが分かった。

これらの項目について因子分析を行い、学校の予算、設備、教員の特別手当、通学への補助金の不足を含む金銭・物資因子、教員の経験、教員養成・現職教員研修等の不足を含む教員研修因子、クラスメイト、親、教員の理解不足を含む理解因子の3つの因子にまとめ、分散分析を行った。被験者内要因分析では、特別支援学校及び普通学校の教員、障害児の親の全グループが、金銭・物資不足、教員研修不足、理解不足の順に高い障壁であると捉えていることが分かった。被験者間要因分析においては、普通学校の親は、金銭・物資不足を、教員より、有意により困難な課題であると認識していることが分かった。教員研修不足については、普通学校の教員及び親が、特別支援学校の場合より有意により困難な課題として捉えていることが確認された。更に、理解不足においては、4グループにばらつきがあり、通常学校の教員は他集団より有意な差でより困難な課題と認識していることが確認された一方、特別支援学校の児童の親はこのような認識が有意に低い状況であることが確認された。

キーワード： 質の高い教育、インクルーシブ教育、障害、認知、保護者、教員、モンゴル



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